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Dissertation:

The importance of regional disparities in the Balkans:

The case study of the Republic of Croatia.

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ABSTRACT

Despite the crisis that it faces, European Union is keeping being enlarged. Most of the Balkan countries are still willing to enter to the E.U. while at the same time, we observe that, inside the 28 members countries, this institution is partly being challenged. The last integration concerned the Republic of Croatia and it took place on the 1st of July 2013. Due to its recent history, this country has faced many socio-cultural and economic problems. In order to prepare its adhesion and get ready to enter the Union, Croatia has received a substantial assistance from EU.

The purpose of the present study is to analyze the evolution of the regional disparities in Croatia after its accession to the EU. For the implementation a Factor and a Cluster analysis were used. The analysis has been realized in a county level and includes economic, social, cultural and environmental variables.

Keywords: Croatian accession, regional inequalities, enlargement

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ACRONYMS

ASNCs: Areas of Special National Concern

CARDS: Community Assistance for Reconstruction, Development and Stabilization

CEEC: Central and Eastern European Countries

EFA: Explanatory Factor Analysis

EU: European Union

FDI: Foreign Direct Investment

GDP: Gross Domestic Product

ISPA: Instrument for Structural Policies for Pre-Accession

LDSA: Laboratory of Demographic and Social Analysis

LLRSG: Law on Local and Regional Self-Government

NUTS: Nomenclature des Unités Territoriales Statistiques

PHARE: Programme of Community aid to the countries of Central and Eastern Europe

SAA: Stabilization and Association Agreement

SAPARD: Special Accession Programme for Agriculture and Rural Development

SDF: Strategic Development Framework

SEED: South and East European development

SFRY: Socialist Federal Republic of Yugoslavia

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CHAPTER 1: Introduction

The last couple of decades, the issue of the European Union (EU) enlargement on the East and the questionable economic ability of the eastern countries to respond to the European standards, constitute interesting subjects for researchers. States wishing to join the EU have to meet the Copenhagen criteria and then transpose the EU's body of law (*acquis*) into their domestic law with no opt-outs allowed (Haughton, 2008). The transition process has created (or uncovered) inequalities previously unknown in the European context, inequalities which exceed greatly those existing between the North and the South within the EU (Petrakos, 2003). Therefore, inequalities have arisen also in the intra-national level, a phenomenon that is significantly observed in Eastern countries. Furthermore, given that the new EU member states markets are not fully developed, they pose a question concerning the future evolution of regional inequalities in the new EU member states and, consequently, the challenges that the (enlarged) EU has to face (Artelaris, Kallioras& Petrakos, 2010). Therefore, considering the high degree of heterogeneity both between the north and south part of Europe and especially the one observed in the Balkan region, which is the region that interest this work, the EU's future portends very challenging.

Regional problems, bilateral disputes, the economic crisis should not affect the accession process, but the truth is that these issues have determined the EU to reconsider its capacity of expanding towards other European "problematic areas" (Ivan &Iov, 2007). This case makes EU to be more selective and not accept the membership application from the countries that they do not fulfil some specific criteria. Hence, on this difficult period we notice the most recent accession to the EU, this of the Republic of Croatia. The objectives of the present work is to examine in which extent the inequalities into a small transition economy, such as Croatia, are persisting or have been partly sharpened after the transition to the EU's family. As Croatia is a Balkan country, we can recognize on its system many characteristics and problematics that face the whole Balkan region. While in other European countries, we observe the efforts made by all level of governments to surpass the economic crisis by undertaking some proactive measures, in Croatia it is noticed a great difficulty on this, due its very central governmental system. Thus, decentralization and empowering of the local governments consist a main factor, which is

still in progress. Croatia seems to adopt two parallel systems of supporting development, based on entirely different logic and practice, one based on EU rules and practice and second one, based on old-fashioned instruments and with many missing elements characterizing modern regional policy (Puljiz&Maleković, 2007).

It is true to say that the crisis has stalled some progress, shaken confidence and requires some new approaches, but it also provides an opportunity to catalyze change at a breadth, depth and scale which has not been seen for a generation (Clark, 2009). Hence, it is required to take crisis as a challenge and try to improve the current unfavorable situation by using the plethora of the existing possibilities instead of keeping a passive attitude and wait from more powerful mechanisms to find out the solution.

1.1 Our interest in the case of Croatia.

The Balkans was not a region that had intrigued the economic world and generally the scientific bibliography with a few exceptions[1]. Although, the last years the EU's need for enlargement, has put this region to the forefront. Most of the Balkan countries had expressed the desire to participate in this ambivalent Union. Thus, the last integration step took place on the 1st of July 2013 and concerns the country of Croatia. Due to its recent history and the relative lack of bibliography (at least in English), the analysis of the economic evolution of such countries and the evaluation of the EU's involvement on those is a unique subject. The enrichment of the scientific bibliography which concerns those special economies is an additional point. Moreover, Croatia presents another interesting characteristic, concerning its recent reconstruction after the war for its independence. Historical elements can sufficiently describe the "multinational" demography, and the cultural heterogeneity of the country. Society has been extremely influenced by war damages and even now, more than a decade later, social life in the different counties of Croatia has formed in accordance with them. Consequently, the present work aims to examine the regional inequalities developing in Croatia as well in economic as in social and cultural terms.

[1]We can mention the existence of the South and East European development (SEED) at the University of Thessaly. This center is effectively specialized in the analysis of economic evolution of the Balkans. As regards the Socio-demographic components, we can mention the Demobalk Association coordinated by the Laboratory of Demographic and Social Analysis (LDSA) at the same university.

1.2 Structure and methodology of the work

In the first section, we are presenting an introduction of some general characteristics of the examined country and a brief presentation of the economic situation of Croatia. In this section it would be also included the pre-accession process of Croatia, its administrative structure as well as some political decisions that have been taken for the creation of a more effective regional development. Moreover, a section about the power and the catalytic role of the Church in the Republic of Croatia is presenting with information that gained through the interviews of people met on our journey in Croatia. The next chapter begins with a brief analysis of the definition of regional inequalities and the meaning that we choose to use in our research. Thus, we ended up that the economic, social cultural and environmental characteristics of the 21 counties of Croatia consists a theme of a great interest. After a theoretical approach on the existed disparities, we move on the creation of our "ideal" theoretical plan by presenting the thematics we would like to investigate, in order to detect the different levels of regional inequalities. Depended on the availability of the data we continue by creating the final theoretical plan that our analysis was based on. The final variables in some cases are not the ideal but they fulfill our first requirement to define all the chosen dimensions. In the second section, it is mentioned the methodology and the tools that will be used later in order to find out the disparities that have been provoked. Here, it is essential to achieve a good selection of the dependent variables and this is the reason that we explain analytically with logical arguments this decision. After a preliminary statistical treatment of the data and the production of the data base at county level (21 administrative units), we have implement an Explanatory Factor Analysis. The objective was to detect the existence of different components of inequalities. Each component (hyper-variable) can be considered as a composite index, based on unidimensional variables. Finally, the results of the analysis will be analyzed in order to abut to the final conclusions and to the final answer of our research. The third chapter consist the analysis, the initial extraction of the factor analysis and then the cluster analysis and some basic results obtained by them. The last chapter constitutes the final conclusions of our work.

CHAPTER 2:The newest member of E.U.: Croatia

The Republic of Croatia is an independent, sovereign and democratic country, which won its independence on 8 October 1991(Croatian Bureau of Statistics, 2012) and it is established after the collapse of bigger federations, struggling with developing new states and appropriate institutions (Ott, 2005). The Republic of Croatia, with the area of 56.594 km2, is situated in the south-eastern part of Europe, surrounded by Alps in the west, Sava and Drava Rivers in the north and east and the Adriatic Sea in the south (map 1). According to the 2011 mid-year population estimate, this area was populated by 4.4 million inhabitants with the average density of 77.8 inhabitants per km2 (Croatian Bureau of Statistics, 2012).Croatia is divided into three NUTS 2 regions and twenty one Croatian Counties (map 2). Even though counties are referred to as regional governments in Croatian legislation, they are actually too small to be considered as regions in European terms, and belong in fact to the local government level (NUTS III level) (Sumpor et al, 2005). Croatian counties show significant economic and social disproportions due to the inability/weakness of many of them to correspond on the local needs.The observation and analysis of those disproportions constitute subjects of great interest both in economic and social terms. The existing disparities have occurred not only due to the national characteristics and the conjuncture the country has faced but also due to the diversity (presented) with the European standards.

Map1. The Republic of Croatia

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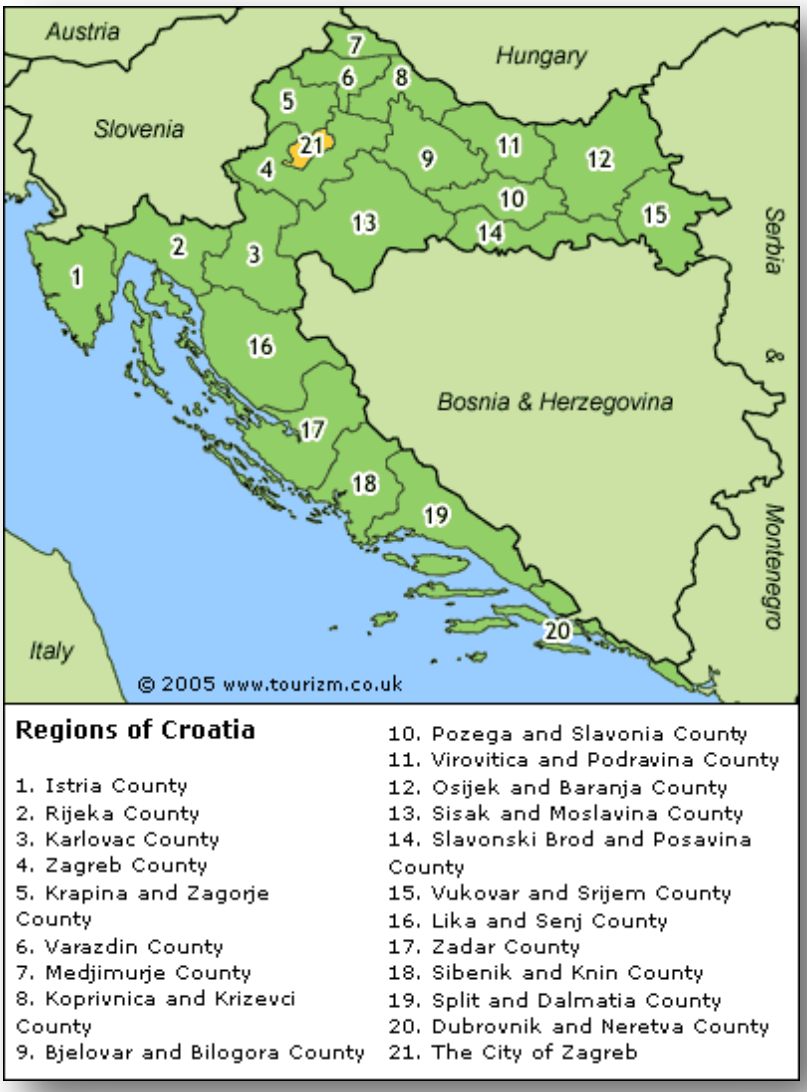
Source: http://www.destination360.com/europe/croatia/map

Map 2. The 21 Counties of Croatia (NUTS 3)



2.1 Historical background

Croatia as a part of the nations which consisted the former Socialist Federal Republic of Yugoslavia (SFRY) had accepted the function of this Union and developed its political life according to that. As Spencer et al (1998) mentions:

> "In Yugoslavia, as in the other socialist states, people associated liberal democracy with decentralization or even separatism. In the first phases of democratization the reformers typically suppose that to attain political self-expression, each republic needs to be liberated from the centralized state,

> either by acquiring more autonomy within a confederal system or by breaking away and becoming independent. Ordinarily it is the communists who want to preserve the centralized state. Only later (too late) do the aspiring democrats recognize the inherently harmful effects of breaking up a union."

The appeal gave the states of CEE, especially the Baltic States, more power in ensuring they would be protected from a Soviet military intervention (Haughton, 2007). Under this fear or the fear of a Serbian sovereignty, Croatia decided to fight for its autonomy. Thus, in May 1990 were held the first multiparty free elections. Although, the process of liberty was not painlessness, the dissolution of Yugoslavia resulted the breaking out of many wars in the Balkan region mainly due to the Serbian faith in the name of the SFRY. Croatia was not an exception on that and had suffered the commonly known "Homeland War".

On September 7, 1991, the EC convened a Peace Conference on Yugoslavia in The Hague, with no compromise and so the war continued (Spencer et al, 1998). The first five years of Croatia's independence were marked by the war for independence and by the occupation of almost one third of the country's territory (Dulabic&Manolovic, 2011).Finally, Croatia becomes really free in 1995, leaving behind a war which has caused extravagant damages in the nation. In this context, the EC decided to recognize the independence of any Yugoslav republic only after its claim had been investigated by its judicial commission, to be headed by a French lawyer, Robert Badinter who recommended recognition of all except Bosnia-Herzegovina and Kosovo (which was not a republic) while it was required that Croatia institutes better protection for minorities (Spencer et al, 1998).

As a result of the above and as a post-socialist country which were used to function under a central planning system, Croatia, as most of the Balkan countries, has not very much in common with the culture, the institutional structure and the economic system of the European Union. Croatia is one of the few countries where real GDP has not grown at all since the beginning of the global financial crisis and this has worsened the fiscal picture, with public debt approaching 60% of GDP (Koerner, 2013). Thus, it had to face many obstacles and challenges during its preparation for its membership. Although, Croatia could be regarded as a functioning market economy able to cope with competitive

pressure and market forces within the Union in the medium term, provided that it continues implementing its reform programme to remove remaining weaknesses[2]. In order to succeed during its transition several measures have been applied, for reconstruction and development with a view to alleviating the consequences of war, facilitating the return of displaced population, encouraging demographic and economic growth and ensuring a balanced development of all regions in Croatia (Bronic, 2008 *newsletter*). Before analyzing the challenges it had to face on that period, it would be probationary to be referred on its transition process.

2.2 The transition process

Croatian application for EU membership was submitted on 21 February 2003, the negotiations began from 2005 and lasted until 2011. In addition, on the first of April 2004 the Commission approves Croatia's application for EU membership and two months later the Council confirms it as a candidate country. Although, the existed criteria from Copenhagen, the EU took a tough line on Croatia in 2005, demanding full cooperation with the International War Crimes Tribunal in The Hague before accession negotiations could begin (Haughton, 2007).

On 1 February 2005 Stabilization and Association Agreement (SAA) enters into force. The main target of this agreement is to promote stability, peace and prosperity into the region of South-Eastern Europe (Samardzija, 2001). According to Haughton (2007), with this agreement the European Commission is offering the removal of commercial and economic barriers and the prospect of a free trade area in return for the CEE states introducing legislation in areas such as competition (state aid) and the protection of property rights that would be compatible with EC rules. Then on 6 December 2011, the Council adopts decision on admission of Croatia and finally, three days later, the leaders of EU and Croatia had signed the accession treaty, while the Referendum on EU accession took place in January 2012 with 66% voting in favor of this accession. The main phases of the negotiation and accession process are presented in the following table.

[2] http://delhrv.ec.europa.eu/?lang=en&content=2745

Date	Phase
21-02-2003	Croatia application
June 2004	Croatia acquired the Candidate Country Status
October 2005	Beginning of the entry negotiations
June 2011	End of accession negotiations
December 2011	Treaty of Accession is signed
January 2012	Referendum on EU accession
21 June 2013	Ratification process
1st July 2013	Croatia is the 28th member country of the E.U.

In economic terms the transition process of Croatia could not be considered (as) disappointing. Without analyzing the reasons that could lead us to not so positive results, we can generally mention that during this period, its average growth rate was one of the highest in Europe, such as most of the eastern countries in the transition period. Therefore, Croatia presented a really low inflation rate comparing it with that of the Baltic States, a fact that lead to an important increase of the real average net salaries. Moreover, as we will analyze in the next section, the EU has enhanced this process through several funds, albeit finally this assistance functioned as a disclaimer for EU which has proved unable to give specific directions to the transition countries. Thus, community funding was in fact used to subsidize state budgets, reflecting the ambiguities of the European construct (Faludi, 2009).

2.3 Financial Assistance

In order to prepare its adhesion, Croatia has received – mainly from 2007- a substantial assistance from EU via instruments and programmes in order to improve its economic situation and its competitiveness and finally get ready to enter the Union.

More specifically, Croatia was benefited financially by some EU's programmes before the beginning/ commencement of the transition period. Those programmes aim to encourage the candidate countries to achieve the EU objectives in order to improve their economic situation and be able to join successfully the EU. Thus, in the case of Croatia we observe a financial assistance of around 278.8 million euro, from 2000 until 2004, from the CARDS (Community Assistance for Reconstruction, Development and Stabilization) programme, while in 2005 and 2006 a total of 252 million euro were available from the PHARE, ISPA and SAPARD funds (Europa, 2013).

Despite the great amount spent for its preparation, the lack of Croatian institutions and

mechanisms which would be responsible to implement appropriately the Structural Funds in conjunction with the high corruption level, oust Croatian economy from its principal objectives. Thus, the absorptive capacity of Croatia regarding those funds constituted an issue of great concern for the EU. Hence, arises as a need the development of activities which enhance the combat against corruption and generally promote the achievement of a great level of social cohesion. In this context it is necessary to punctuate the importance of the geographical dimension, such as the emphasis that is given to the territorial classification, to the reduction of the regional inequalities and so forth.

Simultaneously, this awareness arises due to the negative GDP growth that presented Croatia, in 2012. Although, Oreskovic (2013) notes that

> "The past six years, have seen the absorption of €300 million of pre-accession funds in Croatia, or 37 per cent of the total allocated. Vice Premier Grcic's ministry has boosted this by €150 million in the last 12 months, making the total absorption rate now just over the 60 per cent mark. Although this increase is a significant accomplishment, the pre-accession funds are a minor challenge in comparison with the opportunity of fered by EU structural funds – an opportunity vital to Croatia's prospects of economic recovery."

The foundations for long-term economic development in Croatia remain fragile in the absence of an efficiently functioning legal framework, systemic corruption continues to erode public confidence and trust in the government (The Heritage Foundation, 2013).

2.4 Croatian administrative structure

The appropriate governance of a state is the main criterion of success in every area, especially when referring to an Eastern economy, such as Croatia. Globalization changes not only the context within which government operates, it changes the nation-state itself, and the competence issue is a reflection of the fear that losing control over territory undermines sovereignty (Faludi, 2009). The role of central government as the prime mover of change is especially emphasized in the less developed countries, as it provides not only the essential economic and institutional framework, but also the long-term vision, national consensus and collective trust that determine a society's inner dynamism (Aubert and Reiffers, 2003). The administrative structure of Croatia was formed after the

end of the Homeland War, in the early 90's and as it was mentioned before due to its socialist past, the economy of Croatia was based on a central planning system in which democratic procedures were not so visible. Thus, multi-level governance could constitute a more complex but at the same time more adequate mechanism of management.

Hooghe and Marks (2003) stressed that centralized government cannot answer all needs that derive from variety. While through multi-level governance decision makers can adjust the levels of governance and provide better for requirements that derive from heterogeneity (Sumpor et al, 2005). Croatian government had to deal with the European requirements and form its policy considering the new reality of the free market and reform its administrative system. According to the Strategic Development Framework 2006-2013 (2006), the new role of the state is attained in three main areas: the reform of public administration, the reform of the justice system, and the modernization of the fiscal process. Nowadays, Croatia is made of central government and local units (Bajo&Bronic, 2007), and has posed as a main aim to foster the local economic development.In order to realise an effective strategy it is important to achieve efficient coordination between different bodies at the central state level (horizontal coordination) as well as the coordination between different levels of authority (vertical coordination) (Dulabic&Manolovic, 2011).

Croatia is a country with a large public sector whose role is threatened considerably by the European requirements for competitiveness. Thus, among other problematicsarrises the issue of decentralization which operates as a prerequisite for a smoother transition to EU. Decentralization is based on three core principles of local government: autonomy (or liberty); democracy (or participation); and, effectiveness (Sumpor et al, 2005). The issue of decentralization is a challenging process that most of the members in Baltic had to face during the pre-accession period due to the very central system they used to have and the high levels of corruption they presented. Furthermore, political as well as personal animosities and certain competition between these two governance levels contributed further to the difficulties faced by many local self-governments and counties (Sumpor et al, 2005). As Petak (2002) mentions, since decentralization means the transfer of power, responsibility and resources from the state level to the local level, during the further implementation of the process at a local level it is essential to ensure responsibility and transparency at all levels of administration and to provide a transparent definition of roles

at different administration levels.

Until 2001 counties had dual functions and were primarily responsible for performing delegated tasks from the central government level (Sumpor et al, 2005), in year 2001 was adopted the new Law on Local and Regional Self-Government (LLRSG) in which counties are defined as the units of regional self-government. This parameter enhanced the general target for fostering the local self-governance without, although, setting specific directions in order to succeed an effective management. The new system replaced the former system of socialist self-management at local level by a hierarchical system with relatively strong central control over the county governments (Maleković, Puljiz& Bartlett, 2011). The foundations for long-term economic development in Croatia remain fragile in the absence of an efficiently functioning legal framework, systemic corruption continues to erode public confidence and trust in the government (The Heritage Foundation, 2013).The foundations for long-term economic development in Croatia remain fragile in the absence of an efficiently functioning legal framework, systemic corruption continues to erode public confidence and trust in the government (The Heritage Foundation, 2013). Although, every level of government has to perform certain public activities, and for this reason it is allocated certain revenues (Bajo&Bronic, 2007). In order to keep or create a balance between the economy of every county it is needed to offer in every region a minimum of public services. Hence, it is required to maintain the independence of local administrations both in the exercise of functions and in earning revenues, in connection with which it is most important to "ensure approximately the same opportunities for the provision of services to all citizens" (Petak, 2002).

Although the fiscal capacity is not similar in every county and thus, inequalities in several areas could arise. In order to avoid this phenomenon, it is required to explore the needs and the capabilities of each region and create a sufficient plan which would cover a minimum of public needs. As it is expected good local governance has impacts on improved services delivery and local economic development, it is evident that it is complementary to and not in conflict with the local self-government functioning (Sumpor et al, 2005). Good local governance may lead to a fair competition between counties and increase as much the quality of services as the cooperation and good relationships between them.

In order to have a healthy economy the expenditures and the revenues of each county have to be in balance. For this, it is needed to enhance activities on areas where each region has its competitive advantage and promote the cooperation between them, in order to avoid the exclusion of those which are lagging behind. In Croatia due to the damages of the recent war and due to its high territorial heterogeneity, many counties are unable to fulfil their functions and are highly depended on the central government's assistance. This dependence causes major problems on the management and the decision making process. The foundations for long-term economic development in Croatia remain fragile in the absence of an efficiently functioning legal framework, systemic corruption continues to erode public confidence and trust in the government (The Heritage Foundation, 2013). Moreover, another important prerequisite for the success of the local government is the function of a transparent system, where the activities and responsibilities are clearly defined.

According to the Law on Local and Regional Self-Government, counties are responsible for activities of regional importance, such as education, health care, urban planning, economic development, traffic, and transport infrastructure, and for establishing a network of educational, health, social, and cultural institutions while cities and municipalities are responsible for local activities whose purpose is to accommodate the immediate needs of citizens in their geographical area (Drezgić&Filipovića, 2010). Moreover, cities that have more than 30.000 inhabitants[3] can take over some of the county services, if they have sufficient resources for their provision (Sumpor et al, 2005). In addition to this, it is interesting to note that economic development as a task is not explicitly mentioned as a task of local government, but as a task of counties (Sumpor, 2004). It is worth mentioning that the segmentation in counties in Croatia is not such a successful process/diversification. The counties are institutionally weak and many local processes have to be realized in urban or municipal level. Most local governments have no adequate tools and system according to which they could possibly communicate to the higher levels of government what they really need (Sumpor, 2004).

2.5 The role and the power of church

[3] On a total of 127 cities, only 18 have more than 30.000 inhabitants (Census 2011)

During the preliminary diagnostic study realized in Croatia (December 2013), an important aspect was systematically mentioned during the interviews conducted in different cities of Croatia: the Church still remains a predominant actor inthe daily life ofCroatsand functioningof the society.

2.5.1 Acceptance of the different from the Government and the church and peoples' reaction

The past year (2013), Croatia has been stigmatized by three different main events. The first one concern a referendum[4], which took place on Sunday 1st of December, and it was referring to a law which the government proposed to put in constitution about the definition of the term family. Thus, the dilemma put by the government was that people can be considered as family if only a marriage between woman and man has been realized or not. The influence of the Church on Croatian people was determined. The results supported Church's opinion in all counties except from the ones of Istria and Rijeka. Homosexuality cannot be acceptable by law in Croatia at the same time while other European countries are voting for the rights of homosexuals.

Moreover it is remarkable to mention that many people who think that this law is unfair, they did not even appear in the voting process keeping a more passive behavior and leaving the final decision to the most conservative society. This absence can be considered as disinterest but also can be considered as the behavior of people who has been paralyzed by displeasurewith the government which has spent a great amount of money to put this law in the constitution while Croats have to face more important socio-economic problems, such as unemployment, in a daily basis. This conclusion has been raised due to the great levels of corruption in all levels of governance and the loss of trust this phenomenon causes to the people.

Furthermore, the dissatisfaction of people has been enhanced by the behavior of two ex-ministers who had stolen a great amount of money from the public Budget and left/escaped the country without receiving any consequence. Again Croats seem to be frustrated by this story although this is not enough for making them leave the passivebehavior and show their anger in action. The same corrupted behavior is observed

[4] Citizens may directly participate in taking decisions on local government activities through referenda and local citizens' meetings **(**Bađun, 2009**)**.

by many politics, even in the local level of governance. Due to this disappointed situation people do not want to be informed or active in politics. Thus, the combat against corruption must be enhances in order to result a more effective participation of the citizens. Although, about this concept, one should not aim so high to include in the term efficient and effective economic and social policies, even less the general quality of life of the population (Cular, 2000).

2.5.2 Acceptance of minorities

After the collapse of the Yugoslavian union and the determination of the borders of the new nations it is observed the exchange of population but also in some cases the stay of some ethnicities into the borders of a neighbor country. In the case of Croatia the major problem is observed to the regions near the Serbian borders which are inhabited by some Serbian minorities. A part of the Serbian national minority, together with the main political parties representing the Serbs in Croatia, from 1990, and particularly from 1991, refused to express loyalty to Croatia as a sovereign and independent state. Thus the lack of the basic legitimacy of the newly formed state among the Serbian ethnic community was the main reason for their resistance to recognize the new Croatian legal system over the territories in which Serbs constituted a majority of the population (Cular, 2000).

Those problematics may occur almost a decade earlier, although such episodes arise nowadays as well. Serbian minorities in Croatia face many troubles both from the Croatian and the Serbian nation. On the one hand they have lived all their life in Croatia, so Serbia does not accept them as Serbians, on the other hand due to their Serbian origins, the Republic of Croatia does not recognize them as Croats. Thus, those people are in the middle of a political debate where consequences hit them from both sides.

The cruelest dispute/conflict that the Serbian national minority faced this year were provoked by the Church's society and its greater extent occurred in the region of Vukovar (where most of the Serbians live). The incident was the use of the Cyrillic alphabet by those minorities. As Croatia uses the Latin alphabet, the supporters of the "tradition" which are consisted by the Church and the most conservative society argued this phenomenon as unacceptable and thus, Croatian government prohibite the use of Cyrillicletters in its domination.

2.5.3 Acceptance of (preventative) informing

Finally, the third greatest issue that occupied Croatian society this year was the import of some preventative classes in schools which concern the sexual education of the teenagers. This kind of education is extremely important especially nowadays that the information of sexual life is mostly developed by the media in an unorthodox way and confuses the student's sexual attitude. It is no coincidence the percentage of the bad first intercourses is very high. Moreover, according to the research made by Larsson et al (2006) the implementation of a preventative education program could be one way of reducing the risk for unwanted pregnancies and sexually transmitted infections among high school students.

Once again, Church's attitude was against the implementation of such programs supporting that using this way is like pushing students on an early sexual life and on prostitution. The final result was that this kind of project has been inactivated.

In all the above paradigms, even if the Church was right or not, it is obvious the power it has and its influence on the decision making process, but also on public opinion.

2.6 The Croatian economy

As regards economic criteria, Croatia can be regarded as a functioning market economy (Boromisa and Samardžija, 2006 eu-croatia). Generally, Croatia is well positioned among recent new member states, its average growth rate was one of the highest in Europe, such as most of the eastern transition countries. According to available indicators, it seems that Croatia can be compared with new member states and that in some areas has better starting position than adhering states (Boromisa and Samardžija, 2006 eu-croatia). Therefore, Croatia at first, presented a really low inflation rate comparing it with that of the Baltic States, a fact that lead to an important increase of the real average net salaries. Nowadays, inflation has slowed, but the state influences price levels through the still-significant presence of state-owned enterprises (The Heritage Foundation, 2013). On the other hand**,** all basic Croatian macroeconomic indicators,except inflation, are worse than theaverage for South EasternEurope and the average for all transition countries **(**Ott,2009).

In the case of Croatia three are the main enemies of the macroeconomic stability, the slow growth of exports, the high levels of structural unemployment and the high share of state expenditure in GDP.

> "As Koerner (2013) mentions in a recent report "The credit-driven economic boom of the years preceding the global financial crisis turned into a bust when foreign financial flows declined sharply. Croatia is one of the few countries which have not seen any year of positive GDP growth since 2008. From 2008 to 2012, the economy shrank by a whopping 11%. Real GDP dipped back into recession in 2012, after zero growth in 2011. Also for 2013 it was expected a recession, before the economy will gradually recover in 2014."

In order to resolve those problems and keep being globally integrated in the financial sense Croatia firstly, has to increase the growth rate of real GDP, maintain a low rate of inflation, decrease the unemployment rate, to further increase the rate of the net income, keep the growth of foreign indebtedness at no more than the current level and finally keep the ratio of public debt to below 60% of GDP (Government of the republic of Croatia, 2006).

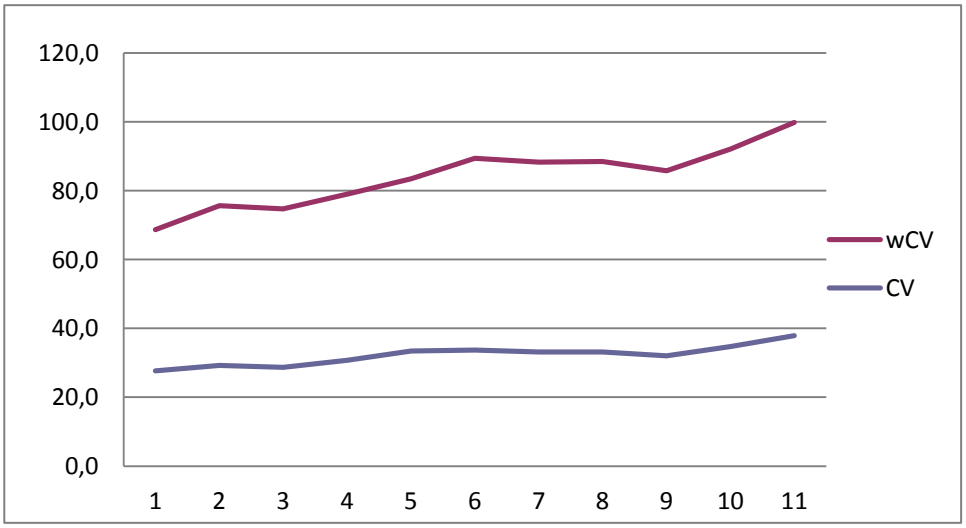
Moreover, it is needed to take under consideration the international economic situation and analyse the influence of the global financial crisis to the Croatian economy. Hence, in order to avoid the worse consequences of the crisis and improve its position in the global market is required to adopt and implement some regional reforms. Some of those reforms are broadly presented in the Strategic Development Framework (SDF) for 2006-2013. Economic reforms began in 2000 and in general strengthened economic activity for a nine year period, facilitating GDP growth. Moreover these reforms have contributed to increase living standards and real incomes, boost consumption and investment in the economy, housing and tourism, and bolster savings (Bertelsmann Foundation**,** 2012). As we can observe from the data, during the period 2000- 2010, the GDP pc has significantly increased with the city of Zagreb having the highest score in each year. More specifically, we observe a continuous increase in the average GDP pc of the country until the year 2008, which represents the beginning of the global financial crisis. As most of European countries, this crisis has extremely affected the weak economy of Croatia. Since the last quarter of 2008 until the early 2013, not only the GDP pc but also the whole GDP has fallen (Bertelsmann Foundation**,** 2012).

By analysing the collected data, the divergence between the GDP pc of each county at each year of this period is obvious, especially when it is compared with the city of Zagreb. In order to calculate and highlight the significant variations between the strong differences in the GDP pc, it is more appropriate to evaluate these divergences through the index WCV (weighted coefficient of variation). This index shows us the extent of those differences. Thus, the higher scores of WCV the greater deviation, while conversely, the smaller value it takes, the smaller derogations exist. Consequently, as we can see from Table 2.1, despite the increase in GDP pc in nominal prices we are witnessing a rise in inequality over time, i.e. we observe a strong tendency for divergence. Obviously, the WCV presents a clear positive trend that does not appear when divergences are calculated on the basis of the non-weighted CV.

Table 2.1

Counties	Wi	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
County of Zagreb	0,074	4,236	4,166	5,111	5,249	5,731	6,368	6,458	7,360	8,036	7,803	7,803
County of Krapina-Zagorje	0,031	3,995	4,639	4,843	5,001	5,161	5,993	6,345	7,144	7,377	6,576	6,085
County of Sisak-Moslavina	0,040	4,949	5,067	5,274	5,345	5,654	6,331	7,391	7,200	8,432	8,325	8,362
County of Karlovac	0,030	4,124	5,054	5,581	5,408	5,580	6,125	6,923	7,825	8,451	7,684	7,404
County of Varaždin	0,041	4,852	5,422	6,198	6,338	6,305	6,711	7,552	8,223	9,404	8,834	8,209
County of Koprivnica-Križevci	0,027	5,487	5,894	5,406	6,441	6,620	7,157	8,386	9,142	9,730	9,371	9,268
County of Bjelovar-Bilogora	0,028	4,105	4,550	5,108	5,135	5,510	5,848	6,634	6,691	8,255	7,677	6,720
County of Primorje-Gorski kotar	0,068	6,682	6,765	7,155	7,997	8,474	9,674	10,560	11,177	12,680	12,305	12,343
County of Lika-Senj	0,012	4,478	4,822	5,941	7,245	9,892	7,603	8,074	8,038	9,725	8,707	8,278
County of Virovitica-Podravina	0,020	4,043	4,654	5,016	5,176	5,410	5,485	6,497	6,923	7,485	6,399	5,869
County of Požega-Slavonia	0,018	3,934	4,320	4,610	5,020	5,383	5,605	5,786	6,505	6,750	6,229	6,053
County of Slavonski Brod-Posavina	0,037	3,260	3,633	3,955	4,065	4,452	4,487	4,972	5,345	6,183	5,606	5,357
County of Zadar	0,040	3,872	4,497	5,027	5,806	6,198	6,731	6,918	7,980	9,051	8,388	8,182
County of Osijek-Baranja	0,071	4,147	4,537	5,145	5,195	5,750	6,127	6,757	7,875	8,871	8,112	7,539
County of Šibenik-Knin	0,026	3,710	3,953	4,466	5,019	5,691	6,513	6,575	7,799	8,156	7,239	7,887
County of Vukovar-Sirmium	0,042	3,184	3,528	3,903	4,127	4,414	4,807	5,501	5,756	6,647	5,974	5,521
County of Split-Dalmatia	0,106	4,097	4,468	4,840	5,192	5,935	6,298	6,932	8,003	8,422	7,952	8,072
County of Istria	0,048	6,828	7,728	8,597	9,275	10,192	10,628	11,377	12,463	13,195	12,810	12,897
County of Dubrovnik-Neretva	0,029	4,679	5,148	5,456	5,990	7,059	7,719	8,482	10,042	10,601	9,990	10,457
County of Međimurje	0,027	4,397	4,855	5,494	5,535	5,855	6,125	7,074	7,581	8,960	8,349	7,883
City of Zagreb	0,184	8,532	9,674	10,525	11,527	12,701	14,216	15,567	16,766	18,554	17,814	17,814
AVERAGE	1,000	4,647	5,113	5,603	6,005	6,570	6,979	7,655	8,373	9,284	8,671	8,476

Figure 2.1



The foundations for long-term economic development in Croatia remain fragile in the absence of an efficiently functioning legal framework, systemic corruption continues to erode public confidence and trust in the government (The Heritage Foundation, 2013). Although, Croatian financial regulation is still too complicated, often burdened with unnecessary detail, and insufficient efficiency in implementation (Government of the republic of Croatia, 2006). Due to this complexity it is essential to also improve the financial mechanisms. The priorities posed in the new development strategy was the change of the education system for the improvement of Croatia's working force, and the generation of linkages between the education system and the market in order to absorb the skilled-staff into the Croatian territory. However, due to the missing institutional links (formal and informal), political instability and low level of collaboration, all the negative development effects recognized in theory like the backwash effects, drain of skilled labour or the time lag in trickling-down are visible throughout Croatia (Sumpor et al, 2005).

Then, great significance was given in the creation of a good entrepreneurial ambient and in the protection of the natural environment, with the expectation to attract more investments. Moreover, Croatia is fortunate due to its scenic Dalmatian coast, which in coordination with the creation of a sustainable good environment could constitute an ideal place which will attract tourism. Despite structural and administrative reforms, inefficient bureaucracy and the backlogged legal system continue to inhibit investment (The Heritage Foundation, 2013). Although, empirical studies on Hungary show that Foreign Direct Investments (FDI) and domestic capital prefer metropolitan and western regions, turning an already unbalanced pre-1989 situation of the regions into a serious core-periphery and east-west disparity (Nemes-Nagy 2000, Lorentzen 1999). Therefore, in order to meet the European's criteria about the cohesion policy, measures like the improvement of the judicial system and the combating of corruption, which is an ambiguous problem in Balkan countries, had been targeted. The cost and time required to obtain necessary licenses exceed world averages and the labor regulations remain rigid (The Heritage Foundation, 2013). In addition, the role of the state has been revised and redefined and the important issue of decentralization has begun to implement, although there is a long way till significant results will be occurred.

Another issue Croatia faces is that a vast majority of policy measures streaming from

basic legal and policy documents are mostly directed towards removing the consequences of the war and not towards addressing the main cause of disadvantage (Dulabic&Manojlovic, 2011). Thus, measures have to be supported on those regions without although losing their primary direction. Therefore, funding has to be given in those regions only in activities that can be absorbed in order to diminish the possibility of losses. The most basic approach is that in order to have an efficient development, the development plan has to target on the improvement of the quality of life of the people and not exclusively to an effective economic growth, to wit the enlargement of some numbers.

Finally, to evaluate the economic situation of Croatia, we could refer to the economic freedom index. This index had been produced by the Heritage Foundation in conjunction with the Wall Street Journal and covers a wide range of economic factors such as the levels of corruption and the effectiveness of the administrative reforms. More specifically, it includes international trade restrictions, government spending relative to GDP, occupational licensing requirements, private property rights, minimum wage laws and other government-controlled factors that affect people's ability to earn a living and keep what they earn.

Therefore, considering the Heritage Foundation’s research/ analysis (2013) Croatia’s economic freedom score is 61.3 for this year, making its economy the 78th freest in the 2013 Index. Its overall score is 0.4 point higher than last year, with gains in the management of government spending and investment freedom largely offset by declines in labor freedom, fiscal freedom, and freedom from corruption. Although, Croatia continues to fall behind other emerging economies in the region, and its overall score remains below the regional average.

CHAPTER 3: The dimensions of Spatial Inequalities

The objective of the present chapter is to describe our approach as regards the content and the measures of inequalities.

3.1 The concept of spatial inequality

It is very important to identify the notion of inequality in order to clarify our research results and interest/point of view on this topic, especially due to the conceptual vagueness that exists around this notion. This difficulty is mainly due to the fact that there is no true consensus about the causes of spatial inequalities and how policy makers should respond to growing spatial inequalities (Kim, 2008). Obviously, inequality may be measured along political, cultural, social and economic lines (Stewart, Brown and Mancini, 2005) while the spatial dimension in itself is an important question that has generated an especially rich scientific and empirical bibliography concerning developing as well as developed countries (Rey &Janikas, 2005). On this work we are going to consider the existed regional inequalities in Croatia, including if possible all the above topics. Regional inequalities within most EU countries, especially in the new member states, have increased significantly during the past decade (Petrakos et al, 2011). In the current regime of intensified globalization in which market imperatives consistently outrun existing institutional capacities for effective regulation, the balance appears to be strongly in favor of increasing inequalities (Scott &Storper, 2003).

Integration enforces spatial concentration and thus increases regional imbalances, and Community policies sometimes are at cross-purposes with each other (Faludi, 2009). The continuing great growth rates attained by the developed countries in comparison with the lower levels of the new members lead to an exacerbated of this heterogeneity. Moreover, significant differences have been presented also on the behavior of the transition countries and that results that they could not be consider as an homogeneous group. Some transition countries have shown better levels of development than others, although even in those economies, the levels are far lower than it was initially expected.

Analyses of the Central and Eastern European Countries (CEEC) innovation capacities (European Commission, 2001, 2003) confirm that growth in the transition countries has primarily been generated by defensive inter-sectoral restructuring, domestic market consumption and low-cost FDI, while technology accumulation, innovation abilities and

the productive use of national research capacities have been neglected (European Commission, 2003a; Radosevic, 2004). Hence, more advanced regions are expected to benefit more, while lagging (and, possibly, less favored) regions are more likely to benefit less, or even fall further behind (Petrakos et al, 2011).

In order to face this problematic and respond to the new reality, developing countries should discover how to create and sustain the kinds of agglomerations without which they can never hope for entry into the highest ranks of the global economy, while ensuring that income disparities remain well within the limits of the socially just and politically tolerable (Scott &Storper, 2003). Moreover, each economy should search and analyze its national characteristics, following a case by case approach and discover the influence they have in the creation of those imbalances. Naturally, there is agreement that policy intervention should vary according to the nature of the problem, but there is once again skepticism as regards giving special consideration to areas with specific geographic features (Faludi, 2009).

Considering the case of the Republic of Croatia, the concept of spatial inequality has a practical dimension, due to its recent disturbed history. The Government has in fact formally recognized there inequalities. Consequently in 1996 two groups of the Areas of Special National Concern (ASNCs) were defined while in 2002 a third one was instaured(Official Gazette, No. 26/2003). Groups I and II were constituted according to the level of economic damage caused by the ravages of war, the third group areas are considered as underdeveloped according to four criteria: economic development, structural difficulties, demographic criterion and a special criterion (Bronic, 2008).

More specifically, disadvantaged areas are mainly concern those close to the border with Bosnia and Hercegovina, videlicet the counties of Split-Dalmatia, Šibenik-Knin, Zadar, Lika-Senj, Primorje-Gorskikotar, Karlovac and Sisak-Moslavina(Puljiz&Maleković, 2007). Those counties have suffered the most from the war and despite the fact that most of the damages have been repaired, many problems still remain, like the loss of population. Also, parts of the northern and eastern Croatia (Slavonia) have been identified as disadvantaged areas and included in special government schemes created to enhance economic and social conditions in these areas (Puljiz&Maleković, 2007). The islands in Adriatic could not be excluded from those groups due to the low structural

facilities that they promote. As it results from the interviews realized in Croatia it also appears that some islands are confrontingto major handicaps without neither school nor hospitals facilities and hence children and patients have to move to the land in order to cover those needs.

Those historical characteristics had influenced not only the economic situation of those regions but also the socio-cultural one. Therefore, someone can recognize more nationalist behavior in regions near the borders with Serbia and Bosnia and Herzegovina, while regions northern Zagreb and near Italy (region of Istria), which had not been directly affected by the war, present a more friendly to foreigners attitude. Moreover, concerning the county of Istria, which has changed nation four times the past decades, at first it was Austro-Hungary, then Italy, then part of Yugoslavia (the communist form) and finally Croatia, it is obvious the influence of the Italian Empire/dictatorship. Istria due to the great economic development in combination with the influence of Italian culture considers being an autonomy country. Here, it is remarkable to mention that in the demographic process many of the inhabitants of Istria reported themselves as Istian instead of Croatian in the nationality field. In cultural terms Istrians can be consider not as nationalists but more like local patriots, although they insist to state that they are supporters of the past Partisan part, as it appeared through the interviews.

According to the existing data and the analysis made by Puljiz and Malekovic (2007b) the increase of disparities between the counties of Croatia especially during the period 2000-2005 seems to be evidence. The confirmation of the existence of economic and demographic disparities is an easier process due to the analysis of obvious situations and the plethora and nature of data available, while the process is becoming more challenging when we are referring to social-cultural and environmental criteria. Despite those difficulties, on this work, we will try to give a clear analysis which will include all those dimensions.

3.2. The choice of spatial scale for the analysis: Territorial classification (dimensions – NUTS III instead of NUTS II analysis)

In order to analyze and manage the existing regional inequalities in the Republic of Croatia, the investigating territorial unit has to be assessed. Thus, we took in mind the

territorial classification of Croatia, which is consisted by three levels of government which direct to different territorial units, the central/national one, the county or regional one, and the local one. The local level is comprised of 123 cities (or towns), and 425 municipalities, the precise number of which increases frequently (the last change was in October 2003, NN 175/03) (Sumpor, 2004). In the more recent paper of Malecovic et al (2011) Croatia has 20 counties and the city of Zagreb, as well as 557 local units out of which 429 are municipalities and 126 are cities. Even though counties are referred to as regional governments in Croatian legislation, they are far too small to be considered as regions in European terms (Sumpor, 2004). Consequently, the Croatian Bureau of Statistics divided Croatia into three NUTS II regions and therefore the 21 counties of Croatia can be considered as part of the local government level or Nuts III level. Despite this new classification many times by the term regions we are referring to the 21 counties. Therefore the twenty one counties of Croatia are the County of Zagreb, the County of Krapina-Zagorje, the County of Sisak-Moslavina, the County of Karlovac, the County of Varaždin, the County of Koprivnica-Križevci, the County of Bjelovar-Bilogora, the County of Primorje-Gorskikotar, the County of Lika-Senj, the County of Virovitica-Podravina, the County of Požega-Slavonia, the County of SlavonskiBrod- Posavina, the County of Zadar, the County of Osijek-Baranja, the County of Šibenik-Knin, the County of Vukovar-Sirmium, the County of Split-Dalmatia, the County of Istria, the County of Dubrovnik-Neretva, the County of Me–dimurje and the City of Zagreb.

Considering the above situation and the strong demographic inequalities of Croatia, we decided to base our analysis in a county or NUTS III level. As shown by Malekovic, Puljiz and Bartlett (2011), the population is unevenly distributed among local units, a large number of them have less than 3 000 residents. We strongly believe that such an analysis at NUTS II level will miss remarkable results due to the great heterogeneity that exists in such large areas. Moreover the small number of such units, there are only three regions at NUTS II level, limits the usefulness of such an analysis The counties of Croatia show remarkably great regional disparities, the categorization of the Areas of Special National Concern that were mentioned above is an evidence of this, moreover it is quite interesting to analyzetheir geographical footprint.

An important factor for the existence of those inequalities and the inability of many counties to perform legally required functions and tasks on their own constitutes the wide

and uneven spread of population. Despite the fact that the sizes of local governments differ significantly, we can meet local governments with more than 100.000 inhabitants and others with less than 3.000, they all have the same responsibilities and need/have to provide the same public services. Thus, due to economic and demographic problems not all local governments can possibly have the capacity, fiscal and human resources, to fulfil all legally required tasks (Sumpor, 2004).

3.3 Selection of the first "ideal" variables- indexes (ideal theoretical basis)

Our interest in this research is to find out the characteristics of the existed regional disparities between the counties of Croatia.As we have mentioned before those imbalances can be found in a wide range of fields so we had to clearly precise the dimension of spatial inequalities that we were going to examine. Thus we ended up to 9 different thematic dimensions. The first one corresponds to the economic situation of each region, the second one analyzes the level of life, then we have the social dimension and the social welfare, another important dimension is the population and how it is derived in space. Hence, the cultural dimension comes to complete this spreading/expansion. Moreover, important fields constitute the quality and level of infrastructure and if they function in a friendly way for the environment, the environmental dimension rises as a need for a sustainable life and finally the local governance and how it promotes satisfactory policies constitute an interesting theme of analysis.

For each thematic dimension there is a set of independent regional variables in order to quantify each partial influence, although we have to mention that we are presenting the ideal part and due to practical problems some of those variables may not be included on the final analysis process. In order to organize better our work a matrix of indicators has been constructed. The rows correspond to the thematic dimension, to the acronym of the indicator and then to its definition, while the columns to the selected ideal variables. The following sector describes those ideal indicators and presents the reasons of their election.

1. Economic dimension

Commencing with the economic dimension it is remarkable to note that the disparities in wealth constitute the main cause for the expansion of multiple inequalities also in other

sectors. Hence, it is obvious the reason why the GDP data are necessary to our work. Then, for the description of the economic situation of each county, it is essential the use of indexes which concern the active population and the productive structure of each region and thus the employment level and the employment structure as well as the unemployment rate can be proved very useful on this. A more reasonable alternative is to focus on employment/population ratios, although these tend to be strongly influenced by all the social and cultural factors that affect the labor market participation (Nickell, 1997).

Moreover another interesting theme we could analyze is the percentage of people who travel in neighboring counties in a daily basis for their work, the commuting level shows if the money produced in a region stays on it or returns to the worker's place of origin through his consuming behavior. The journey from home to work and back is therefore an important aspect of modern life, affecting people's well-being, and it demands difficult decisions about mobility on the labor and housing market (Nickell, 1997).

In addition, it is important to compare the fiscal capacity of each county through the analysis of its local revenues and expenditures, in combination with the existence of some local taxes in order to find out if the public services every county provides,reciprocate to the needs and revenues it has. Here it is valuable to define that with the term fiscal capacity we are referring to each county's capacity to raise revenue from its own sources (Bajo&Bronic, 2007). Therefore, in order to increase its revenues and consequently its economic development, the counties adopt different measures in order to attract investments. Some of them are oriented on tax relieves and financial incentives, subsidized loans, subventions etc., others focus their efforts on infrastructure improvement and satisfying specific investors capital needs (Đukic&Bodrota, 2011). According to this theme reality shows that in Croatia, although the majority of direct war damages have been repaired in the meantime, indirect effects such as absence of major foreign direct investments into production facilities are still obvious, particularly in the areas outside of the capital city which attracted by far the most of the foreign investments (Puljiz&Maleković, 2007). Thus, it would be useful to find out some data about the investment ambient that promotes each area, trying to create a more favorable climate for investment.

2. Level of life

The housing level of a county is useful in order to investigate its existing or potential ability to receive visitors or new residents/inhabitants. Furthermore, this dimension shows us the intentions and the policies that each county adopts to promote its land and attract visitors and the kind of visitors is referring to, this depends on the facilities it offers. In this concept we could calculate two different variables, the number of overnight stays and the number of beds. Thus, number of overnight stays refers to the number of nights that a tourist spent (or reported) in an accommodation facility while number of beds includes permanent and auxiliary beds (Javor& Lennon, 2001).

Another important factor which describes this dimension is the land uses. Land uses indicator requires taking under serious consideration the heterogeneity of land. Using this indicator we examine in which percentage the rural space has become urban or industrial in each county and consequently on which extent the development has been achieved. The calculation of the total available land and the percentage of utilized land are essential in order to know the potentials that each county has and at which extent it uses them. This variable is extremely important in Croatia because some areas such as Lika, the hinterland of Dalmatia, but also the majority of the islands have for a long time suffered from unfavorable geographic conditions, reflected primarily in bad transport communications with major urban areas (Puljiz&Maleković, 2007).

3. Social dimension

In the social dimension the most significant variables concern the education system. Thus, the percentage of educated people by meaning people who have finished the secondary school and the percentage of people between the ages 24-60 with tertiary education, give a satisfactory view of the social structure of an area. In addition, due to the multicultural-mixed population of Croatia another important aspect is the existence of supportive education targeted for internal and external immigrants. Although, it is difficult to find these kinds of data at a district level or in many cases they don t even exist in such scale.

4. Social welfare

In social terms, it is important to analyze the healthcare system and the services provided in every county because the quality of them affects people and reflect social

values.Generally, in new European members, like Croatia, the healthcare system has a bureaucratic climate and approach (Borovečki et al, 2005). While there have been made some reforms the result of them has not been yet evaluated positively. In order to evaluate if the healthcare services are adequate in every region we could use indexes such as the number of beds in hospitals or medical care's facilities, number of doctors per inhabitant and number of nurses per inhabitant. The first index has been selected because hospitals' purposes are to protect the wellbeing of patients, foster their healing process, and help patients and their families to cope with disease (Borovečki et al, 2005). On the other hand, the NUTS III classification in which there are lagging behind counties where hospitals infrastructure is not available, requires the examination of indexes such as the percentage of doctors or nurses in relation with the county's population.

5. Population

The demographic structure of the population, especially in a country such as Croatia where the population is anarchically widespread in space, constitutes an important variable in order to investigate the reasons why there is this expansion. Geographic isolation coupled with other unfavorable economic and social factors has resulted with intense and long term migration which has severely deteriorated the human resource base and seriously endangered their long-term development perspectives (Puljiz&Maleković, 2007). The outmigration due to the war and the consequences of it determined the socio-economic situation of Croatia and it is obvious even now, more than a decade later, despite the improvements that have occurred. Therefore, variables such us population density, the aging, the sex and the dependency ratio as well as the change of population over time in every county and then particularly in rural areas constitute necessary tools for the presentation of the socio-economic condition of Croatia.

6. Cultural

Friendship across ethnic lines is a measurable and useful indicator of tolerance in a society; the depth and extent of friendships can be compared to preferences and beliefs about their value by different sub-populations (O'Loughlin, 2010). After the collapse of Yugoslavia, it is estimated that there are more than 20 ethnic groups and at least 10 different religious groups in Croatia. The existing ethnic prejudice between the Croatian counties vary in the degree of ethnic diversity, ethnic economic inequality, and ethnic

occupational segregation and have different historical legacies with respect to the treatment of ethnic minorities and related ideologies (Kunovich&Hodson, 2002). This multicultural environment influences the social-cultural life of the inhabitants. It is a subject of great interest to investigate and analyze the different levels of behavior and tolerance to other ethnicities in every county of the country. Hence, we ended up with two separate variables, the one which concerns the mixed population of each district and the other which concerns the population segregated by religion preferences.

7. Infrastructure

The collapse of the socialist infrastructure in the early 1990s had led to large investment requirements in CEE countries, including the extension and/or reconstruction of entire networks, such as telecommunications, highways, railways, airports, air traffic security, and water (Brenck et all, 2005). In combination with the strongly increased use of automobile network the last few decades, the government of the Republic of Croatia recognized the need for the construction of a new highway network. The extent of the use of this network by the Croats evaluates this costly endeavor successful or unsuccessful. It is worth to mention that the Croatian highway network is predominantly tolled. The high cost of movement and the tolls' level has been systematically mentioned during the interviews, reflecting that most of the residents are clearly unsatisfied.

Concerning this dimension is essential to find data about the level of public transportation that each county provides. Alternative ways of transportation like the use of train and buses have to be improved in order to fulfillthe needs of people. Thus, public transportation which needs dedicated infrastructure and railway traffic are significant variables to describe this dimension.

8. Local governance

Croatia is realizing a decentralization process in order to give more power and responsibilities in local governments and consequently satisfy more successfully the local population's needs. Local level of governance is more able to recognize and identify the local needs and propose and implement adequate ways to fulfill them. Although it is observed that local authorities have the third-highest perceived level of corruption in Croatia, after the judiciary and health care **(**Bađun, 2009**)**. In that problematic condition,

citizens seem to prefer holding a passive behavior. The results of a project on budget supervision exercised by non-governmental organizations and citizens suggest that the participation of citizens in the budget process is inadequate and that they are insufficiently aware of initiatives to support the local budget supervision (Maletić, 2008). Therefore, the variable we could use on this subject is the percentage of people's participation on the politic scene of each county. Moreover it would be interesting to investigate if there is cooperation between neighboring counties when they face similar problems. Although this kind of data is difficult to find in case that they already exist.

9. Environmental dimension

One of the main advantages of the Republic of Croatia is its very well preserved environment and biodiversity, this fact, along with favorable climatic conditions, long developed coast and convenient geographic position in Europe, gives a sound base for strengthening of tourism as one of the main industries in Croatia (Schneider, 2008). In combination with the advantages gained in social level by a well preserved environment it is essential to be taken some special protection policies in a county level. The variables that could describe the level of the environmental conscience are the level of existing pollution, grime or other environmental problems that each county faces, the amount of green space that corresponds to every inhabitant and last but not least the environmental policies which promote and implement every county.

3.4 Selected variables measuring inequality levels

The collection of data for our ideal preliminary draftcannot be easily and uncostly achieved and thus our analysis is necessarily constrained by the unavailability of microdata. Hence, we have followed two different processes in order to collect the necessary data that could give us a precise view for the selected dimensions. The first process constitutes an indirect research and includes the research made through internet, basically by searching on the sites of the Croatian bureau of statistics and that of Eurostat. The second method includes an on field survey realized by a trip in the Republic of Croatia and more specifically the accommodation for a few days in Osijek, in Zagreb and in Rijeka cities and a short visit in Karlovac city and the village nearby by the name DugaResa. This direct process yielded not only tangible results such as the collection of

data but also intangible ones like the better and more complete understanding of the function of the Republic of Croatia.

More specifically, the objective of the on field study was to collect data for the rest dimensions for which we had no luck on the first process. Thus, the communication with the Croatian Bureau of Statistics and the visit to its library helped us collect the adequate data in order to realize our analysis. Although this experience was not so satisfactory, the existing data were not in digital form and thus we had to take pictures of the pages with the tables, by selecting the most important ones from huge columns of books. Moreover, this travel enhanced us to develop a wider and more precised personal view of the socio-economic life in Croatia. That has been accomplished through the personal interviews with local people from different parts of Croatia, but also with people from the neighboring countries who travel a lot in Croatia. Analytically, the most important information yielded by one woman from Slavonski-Brod, two men from Rijeka and Istria and a family from Vukovar which lives in the city of Osijek.

Finally, the collection of data process was successful, all the data collected concerns the 21 counties of the Republic of Croatia. We can already observe great disparities between them, the population density gap is the most obvious on this part. For the purpose of the research we selected 34 indicative variables. On the following table (Table 3.1) we can see all the variables finally collected and in which thematical category they belong. Moreover, some notes concerning specific variables are presented as well as the utilized source of the data.

Zone of Study: Republic of Croatia

Territorial units: 21 counties
Eight thematic dimensions:

1. Population (8 variables)
2. Economy (8 variables)
3. Education (3 variables)
4. Socialwelfare (1 variable)
5. Leveloflife (3 variables)
6. Environment (4 variables)
7. Cultural (5 variables)
8. Infrastructure (2 variables)

Table 3.1. **Selected Variables and its definition.**

	Indicators	Definition	Notes	Source
Population	pop1	Population density per km2	It was used the recent census of 2011.	Croatian Bureau of statistics
	pop2	Weight of each district	% total population by district, 2011.	Croatian Bureau of statistics
	pop3	Percent of Population's growth 2001-2011	Change of population between the period 2001-2011	Croatian Bureau of statistics
	pop4	Sex ratio	The ratio of females to males in the population. (female/male)	Croatian Bureau of statistics
	pop5	Aging ratio	% of population above the age of 65 by district, 2011. (Pop 65+ / pop)*100	Croatian Bureau of statistics
	pop6	Dependency ratio	% of population under 14year old and above 65 year old by district, 2011. (100* (0-14) + (65+)/15-64))	Croatian Bureau of statistics
	pop7	Homeland War and its after-effects _ Population with difficulties in performing activities of daily living	% of Homeland war population in terms of total persons in difficulties in performing activities of Daily living	Croatian Bureau of statistics
	pop8	Population with difficulties in performing activities of daily living	% of Homeland war population in terms of total population	Croatian Bureau of statistics
Economy	eco1	GDP pc	GDP per capita	Croatian Chamber of Economy
	eco2	Average annual rate of growth	Counted for the period 2000-2009 100*(((GDP pc 2009 /GDPpc2000)^(1/9))-1)	Croatian Bureau of statistics
	eco3	Commercial Balance (Export -Import)	Export activity-Import activity / GDP (data 2012)	Croatian Chamber of Economy
	eco4	Unemployment rate 2011	The ratio of unemployed people to total active population	Croatian Chamber of Economy
	eco5	Employment level	Proportion of people in employment in total population of the county	Croatian Bureau of statistics
	eco6	Retired people	% retired people on the total population	Croatian Bureau of

				statistics
	eco7	Investment FDI ((1993-Q1 2013))	% FDI (1993-2013)/ GDP 2012	Croatian Chamber of Economy
	eco8	Local Budget	Data from the official site of each district (sources in bibliography)	Official sites of each district
Social-education level	educ1	% of no schooling	It is counted on total population aged 15 years and over	Croatian Bureau of statistics
	educ2	% of Higher education on population 25 years and over	Comprising all non-university colleges, 1st) (6th)) faculty levels and professional studies in accordance with the Bologna Process.	Croatian Bureau of statistics
	educ3	% of University study and Doctorate on population 25 years ans over	Comprising all faculties, art academies, all university studies in accordance with the Bologna Process as well as master scientific, professional and art degree programmes.	Croatian Bureau of statistics
Social welfare	welf1	% doctors per 1000 inh	With the term doctors we refer to medical doctors, dentists and pharmacists, with data of the year 2000	Croatian Bureau of statistics
Level of life	life1	Average m2 by dwelling	Are included all the dwellings, both the small ones (with 1-2 rooms) and the large ones (with more than 9 rooms)	Croatian Bureau of statistics
	life2	% ofverysmalldwellings	Included only the small dwellings (1-2 rooms)	Croatian Bureau of statistics
	life3	% oflargedwellings	Included only the large dwellings (with more than 6 rooms)	Croatian Bureau of statistics
Environment	env1	Average size of agricultural farm	Average number of agricultural farms in hectares	Croatian Bureau of statistics
	env2	Averagenumberofparcels		Croatian Bureau of statistics
	env3	Use of pesticides	% of farms using pesticides	Croatian Bureau of statistics
	env 4	Use of insecticides	% of farms using insecticides	Croatian Bureau of statistics
Cultural	cult1	Population by religion (% Catholics)	% of Catholics in the county	Croatian Bureau of statistics

	cult2	Population by religion (% orthodox)	% of Orthodox in the county	Croatian Bureau of statistics
	cult3	Population by ethnicity (% Croats)	% of Croats who live in the county	Croatian Bureau of statistics
	cult4	Population by ethnicity (% Serbs)	% of Serbs who live in the county	Croatian Bureau of statistics
	cut5	Number of cinemas / capacity per 1000 inh	We counted the seats of each cinema addressed on 1000 inhabitants	Croatian Bureau of statistics
Infrastructure	infr 1	Density of road network m/km2	Are included motorways, state roads, county roads and local roads	Croatian Bureau of statistics
	infr 2	Railway traffic departure of passengers 2012	Departure of passengers in 2012/ 365 days of the year	Croatian Bureau of statistics

3.5 Method of Analysis of Croatian Spatial inequalities

Factor analysis is a useful and recognized method for exploring the structure characterizing the relationship between a large numbers of initial variables. Since no prior hypothesis is made about the number and name of factors, explorative factor analysis is used (RasicBacaric, 2006), as a tool of our research in order to reduce the large number of variables and avoid the intercorrelation between them. More specifically, the goal of factor analysis is to reduce "the dimensionality of the original space and to give an interpretation to the new space, spanned by a reduced number of new dimensions which are supposed to underlie the old ones" (Rietveld& Van Hout, 1993), or to explain the variance in the observed variables in terms of underlying latent factors" (Habing, 2003). In a few words, this method attempts to bring intercorrelated variables together under more general, underlying variables (Kootstra, 2004).

Therefore, as Kootstra (2004) has mentioned,

> "The starting point of factor analysis is a correlation matrix, in which the intercorrelationsbetween the studied variables are presented. The dimensionality of this matrix can be reduced by "looking for variables that correlate highly with a group of other variables, but correlate very badly with variables outside of that group" (Field 2000: 424). These variables with high

intercorrelations could well measure one underlying variable, which is called a 'factor'. "

The main goal is to reduce the number of variables without losing a large amount of total inertia, the final factors have to be independent and it is important to account for meaningful amounts of variance, in order to lead with factors which will be useful for the interpretation of the examined phenomena. Thus, we lead to a few final composite factors which are multidimensional and they will categorize the principal variables giving us new composite dimensions, in order to explain our results. In a more precise form the goals of factor analysis are

1) to help an investigator determine the number of latent constructs underlying a set of items (variables)

2) to provide a means of explaining variation among variables (items) using few newly created variables (factors), e.g., condensing information

3) to define the content or meaning of factors, e.g., latent constructs (Suhr and Shay, 2009).

Moving on our methodology, we will use a cluster analysis in order to group the counties into homogenous groups (clusters) and give a logical explanation leading by the statistical results. Since the results of this analysis will be used as clustering variables, factor scores must be calculated (RasicBacaric, 2006).

CHAPTER 4: Detecting the inequalities between the 21 Croatian Counties

The analysis of the nature and level of inequalities between the 21 Counties of Croatia when accessing officially the European Union is firstly based on Exploratory Factorial Analysis. This method allows us to explore the likely underlying formation of a set of interrelated variables without imposing any fixed structure of the outcome. This method allows us to "identify the factor structure or model for a set of variables" (Bandalos, 1996: 389). Consequently we are producing new composite indexes (Principal Factor Components). Moreover, the values of each one of these new indexes allow us to classify the 21 Counties in terms of well differentiated dimensions. Finally, we proceed to a systematic partition of the Counties, on the basis of the new indexes resulting from the EFA.

4.1. Six major dimensions of inequalities

Initially the implementation of standardized EFA[5], using the statistical program SPSS 20, concern all the variables presented in the previous chapter that is 36 variables corresponding to 8 thematic dimensions. Examining the results and especially the communalities (percent of variance in a given variable explained by all the factors), we observed some unlikeness and thus, we decided to exclude the variables that are not contributing significantly to the model.

Therefore, we decided to exclude two variables and more precisely, the sex-ratio (pop4) and one cultural variable: cult5 (capacity of cinema's seat per 1000 inhabitants). These two variables offer no added value to the interpretation of the final dimensions. Omitting them, the inertia (total variance explained) was not modified, confirming that they do not have statistical influence while the meaning and interpretation of the Principal components are also not changing. Moreover the number of principal components with or without these two variables remains the same.

It is necessary to mention that rotation of factor axes (varimax rotation) has been implemented in order to identify "simple and interpretable" dimensions (Yaremko*et al*, 1986).Consequently, examining the rotated component matrix and analysing the meaning

[5]It is absolutely necessary to standardize the variables, due to the fact that they are measured on very different scale values

of the principal components, it appeared that other three variables relative to the environmental dimension were superfluous: env2, env3 and env4. They effectively give no added-interpretable value to the final factors and thus, we decided to exclud them as well.

Therefore, the final identification of the factors' structure concern 29 variables distributed as following:

Eight thematic dimensions:

1. Population (7 variables) pop1-pop8 (pop4 excluded)
2. Economy (8variables) eco1-eco8
3. Education (3 variables) educ1, educ2, educ3
4. Social welfare (1 variable) welf1
5. Level of life (3 variables) life1, life2, life3
6. Environment (1 variables) env1
7. Cultural (4 variables) cult1-cult4
8. Infrastructure (2variables) infr1, infr2

The new model obtained gives us very high communalities (with a minimum score of 0,813 and a maximum value of 0,983) (See appendix, Table. EFA).

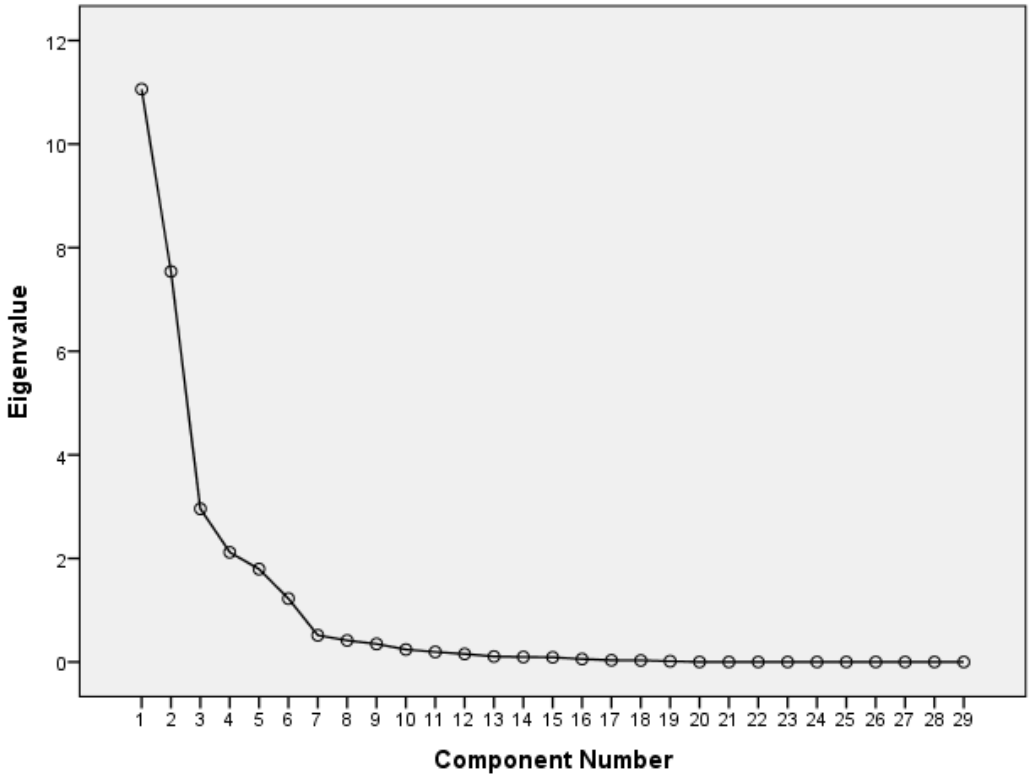
As regards the number of factors (new composite indexes) to be extracted, we used "multiple criteria and reasoned reflection" admitting that the alternative rules proposed in the literature "do not necessarily lead to the same decision" (Henson, Roberts, 2006: 399). The first one is the *Kaiser's Criterion* (Nunnally, 1978). Under this criterion, common factors are the ones with eigenvalue (amount of variance accounted for each factor) greater than one. The second one is the well-known scree test of Cattell (1966). The third one concerns the total amount of variance explained by the extracted factors. As regards the last point, we have to mention that there is no absolute rule or precise threshold. It is currently admitted that the factors to be retained, are those which guaranty about 70-80% of the total variance. Consequently, six (6) factors have been retained corresponding to a total variance explained about 92% which is especially high (Table 4.1.). Moreover the eigenvalues of these 6 factors are clearly higher than one, while the scree plot (Figure 4.1) confirms that the additional information provided by the following factors is negligible: from the 7^{th} eigenvalue and after, the trend is effectively linear.

Table 4.1.: Total variance explained by the six principal components

Factors	Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% ofVariance	Cumulative %	Total	% ofVariance	Cumulative %
1	11,060	38,137	38,137	7,724	26,635	26,635
2	7,540	26,001	64,137	6,198	21,373	48,008
3	2,959	10,203	74,340	3,753	12,940	60,949
4	2,118	7,304	81,644	3,255	11,224	72,173
5	1,794	6,188	87,832	3,138	10,821	82,994
6	1,225	4,223	92,055	2,628	9,061	**92,055**

Extraction Method: Principal Component Analysis.

Figure 4.1: General trend of eigenvalue



The above statistical analysis leads to the first main result: on the basis of the 29 initial values, the characterization of the 21 counties of Croatia can be summarized through **six composite indexes,** ensuring a very clear reduction of the dimensions which was one of our objectives. The loss of information (inertia) is especially limited, less than 8%.

In order to understand the signification and the pertinence of these six new indexes, it is necessary to examine very carefully the results produced in the Rotated component

matrix. Varimaxrotation is employed in cases when the obtained factors are used as the basis for calculating factor scores that are going to serve as input variables for further analyses (Johnson and Wichern, 1992). This is exactly what we are going to do when implementing the cluster analysis. We also have to mention that the rotation converged quickly: only 7 rotations were necessary for producing the final solution. This result once again confirms the adequacy of the model.

As we can see (table 3.3), this matrix indicates that each initial variable has at least one correlation coefficient with an absolute value higher than 0.3, which is the minimum value proposed by Kinnear and Gray (1994) as a criterion for inclusion of variables into analysis.

Table 4.2: Rotated Component Matrix

	Initial variables	Component					
		1	2	3	4	5	6
pop1	Population density per km2	,934					
eco8	Local Budget	,921					
eco3	Commercial Balance (Export -Import)	-,853					
pop2	Weight of each district	,850					
Infr2	Railway traffic departure of passengers 2012	,843					
eco7	Investment FDI ((1993-Q1 2013))	,836					
educ3	% of University study and Doctorate on population 25 years ans over	,795					
educ2	% of Higher education on population 25 years over	,696					
eco1	GDP pc	,662					
Infr1	Density of road network m/km2		-,597				
pop8	Population with difficulties in performing activities of daily living		,953				
pop7	Homeland War and its after-effects Population		,942				
eco5	Employment level		-,869				
educ1	% of no schooling		,864				
eco4	Unemployment rate 2011		,812				
cult2	Population by religion (% orthodox)		,643				
cult4	Population by ethnicity (% Serbs)		,622				
eco6	Retired people			,914			
pop5	Aging ratio			,898			
life2	% ofverysmalldwellings			,726			
pop6	Dependency ratio			,716			
life3	% oflargedwellings				-,794		
Welf1	% doctors per 1000 inh				,716		

life1	Average m2 by dwelling				-,701		
env1	Average size of agricultural farm				-,599		
cult3	Population by ethnicity (% Croats)					-,945	
cult1	Population by religion (% catholics)					-,901	
pop3	Percent of Population's growth 2001-2011						,925
eco2	Average annual rate of growth						,834

The six obtained factors have to be analyzed and explained in order to validate the whole process. Thus, considering the definition of our initial variables and their contribution in the production of each one of the components, the EFA allows to produce six new composite indicators having the following meaning:

1st index : degree of economic urban development
2nd index: dynamic of labour market
3rd index: demographic structure - dynamism
4th index: level of life
5th index: degree of cultural hybridity
6th index: intensity of growth

The first index (see appendix, map 3), represents the degree of economic urban development of each county because it is composed by the variables of population density (pop1), local budget (eco8), average number of departure of passengers per day (2012) (infr2), weight of population of each district (pop2), commercial balance (eco3), Foreign Direct Investment (eco7), percentage of university study (educ3), percentage of people with higher education (educ2) and GDP per capita (eco2) variable. The high positive factor loads on variables pop1, eco8, pop2, infr2, eco7, educ3, educ2 and eco1while the high negative factor loads only on the eco3 variable which represents the commercial balance. The explanation of this phenomenon is that on the first case the variables are correlated with a positive way with the economic development of each district while the second group's correlation is negative. A characteristic example is the city of Zagreb where we can observe unsurprisingly that this spatial unit has the highest score on this dimension, as it attracts the majority of foreign investments and has the high levels of almost all the variables that describe it.

The second index (see appendix, map 4), is reflecting the "dynamic of Labour market". If the variables entering in its construction are effectively the employment level (eco5) and the unemployment rate (eco4) with opposite signs, some other interesting variableshave very high levels of contribution. These variables - with a true qualitative aspect - contribute to explain the functioning of the labor market as well as the difficulties or not to have an employment. Among these variables, we can mention: the population which has suffered from the homeland war (pop7, pop8), the minorities of Serbs (cult4) and Orthodox (cult2), the percentage of people with no schooling education (educ1) as well as and finally the variable which is connected with the road network density (infr1). The first group of variables (pop7, pop8, cult4, cult2 & educ1) interprets the people which face difficulties on finding employment and thus connected with the unemployment rate they have a positive score, while on the other hand if the density of roads is low the commuting process becomes more difficult and we observe a negative score on that variable. Finally, it is obvious that the employment level would have an opposite load on this factor. Here, it is remarkable to mention that the first position is taken by the county of Vukovar-Sirmium where the problems with unemployment and minorities are in a great extent and the last is taken by the county of Istria which faces the less troubles on its labour market's function.

As regards the third index(see appendix, map 5), it is clearly refereeing to the demographic dimension (its structure) as the variables contributing to the formation of this index are the percent of retired and aging population as well as the dependent population and finally the percentage of very small dwellings. This factor shows us the demography of each county. Thus and obviously we have a high positive correlation between all these four variables. The presence of the variable % of small dwellings can be easily interpreted: it is suggesting that we have a positive correlation between this variable and the presence of numerous retired and aged populations. In this case, the most exaggerated example is that of Lika-SenjCounty which presents an extremely great score comparing with the other counties. Although, Lika-Senj ranks first on this dimension and this is not independent from the fact that this region also presents the lowest population density. Thus, this result arises by the fact that this County is generally considered as a region with demographic problem and high aging phenomena.

The fourth index (see appendix, map 6), is related with variables that contribute to describe the level of life in a region. The variables participating significantly to this index are:the medical doctors per 1000 inhabitants (welf1), the percentage of large dwellings (life3), the average m2 by dwelling (life1) and the average size of agricultural farm (env1). It is obvious that the number of medical doctors reflects in part the development of the medical care system in the county while it represents an important social factor of welfare. With large dwellings and large agricultural farms then the level of life tends to be higher than in other regions. Although, in this case we observe that the plurality of doctors is on the big cities where the dwellings due to the greater population cannot be very large. This is the reason why the variable doctors (welf1) is on the positive axis whereas the variables about the dwellings (life1, life3) are on the opposite (negative) side, together with the average agricultural area (env1). Therefore, it is expected to have the lowest score in the county of Zagreb because of the absence of medical infrastructure which is mostly concentrated in its heart, the city of Zagreb.

As regards the fifth index (see appendix, map 7), practically it allows us to evaluate the degree of cultural hybridity. This degree will be very limited when the majority of the population is composed of Croatsand Catholics (high percent in the county's total population). In order to better describe this dimension, we used the notion of "cultural hybridity" which describes the cultural heterogeneity of the area. In some minds a high score of cultural hybridity may seem negative. Although, the mixture of different cultures, of different people and ideologies is a part of socio-cultural development. Thus, on this work we take the cross cultural contact as a positive phenomenon where many distinctive groups are meeting together and finally they create a better and more open society. Moreover, it is noted that cultural hybridity is not only a question of race, of métissage, but also of gender, class and maybe above all of imaginary significations that are constantly subjected to “différance” (Sayegh, 2008). Thus, an interesting observation in that case is that in counties where there was no war or the consequences of it were minimal comparing with other areas having largely suffered of the war, the “cultural metissage” is high. In this instance, we meet the county of Istria which is very influenced by the Italian dictatorship and the Austro-Hungarian domination and therefore its culture differs from that of other more nationalist regions where transculturation is not considered positively.

Finally the sixth index (see appendix, map 8) represents the degree of growth of each district by using the variables of the average rate of Growth of GDP for the period 2000-2009 as well as the percent of population's growth during the period 2001-2011. Here, the county of Zadarranks first with the greatest development both in population and economic terms. In addition, the surprise here is the example of the county of Lika-Senj, which achieves to balance its low population increase by a quite satisfactory annual rate of growth and finally lead to rank among the five first places on this dimension.

4.2 Ranking the spatial inequalities through cluster analysis

In order to realize the grouping of the 21 Counties, we used an hierarchical clustering method that allows us to better understand the degree of proximity between the counties as regards not only one aspect of inequality but the six above mentioned. The input variables are effectively the scores obtained by each county for the 6 factors produced by the factor analysis. Hierarchical Cluster analysis procedure was conducted using Ward's linkage method with Euclidean distance measure. The following table presents in details the agglomeration process that is the way through which counties are progressively regrouped. At the first stages, the counties that form a group are very similar while at the end of process, the differences are especially important so that the grouping has not anymore sense. The two counties presenting the highest degree of similarity are the counties of Zadar and Dubrovnik-Neretva. Also the counties of Krapina-Zagrie and Varazdin are very similar. At the opposite, as it was expected, the city of Zagreb is the last spatial unit regrouped to the other. In fact, its dissimilarity with all the other counties is so pronounced that it is, in itself, a specific group.

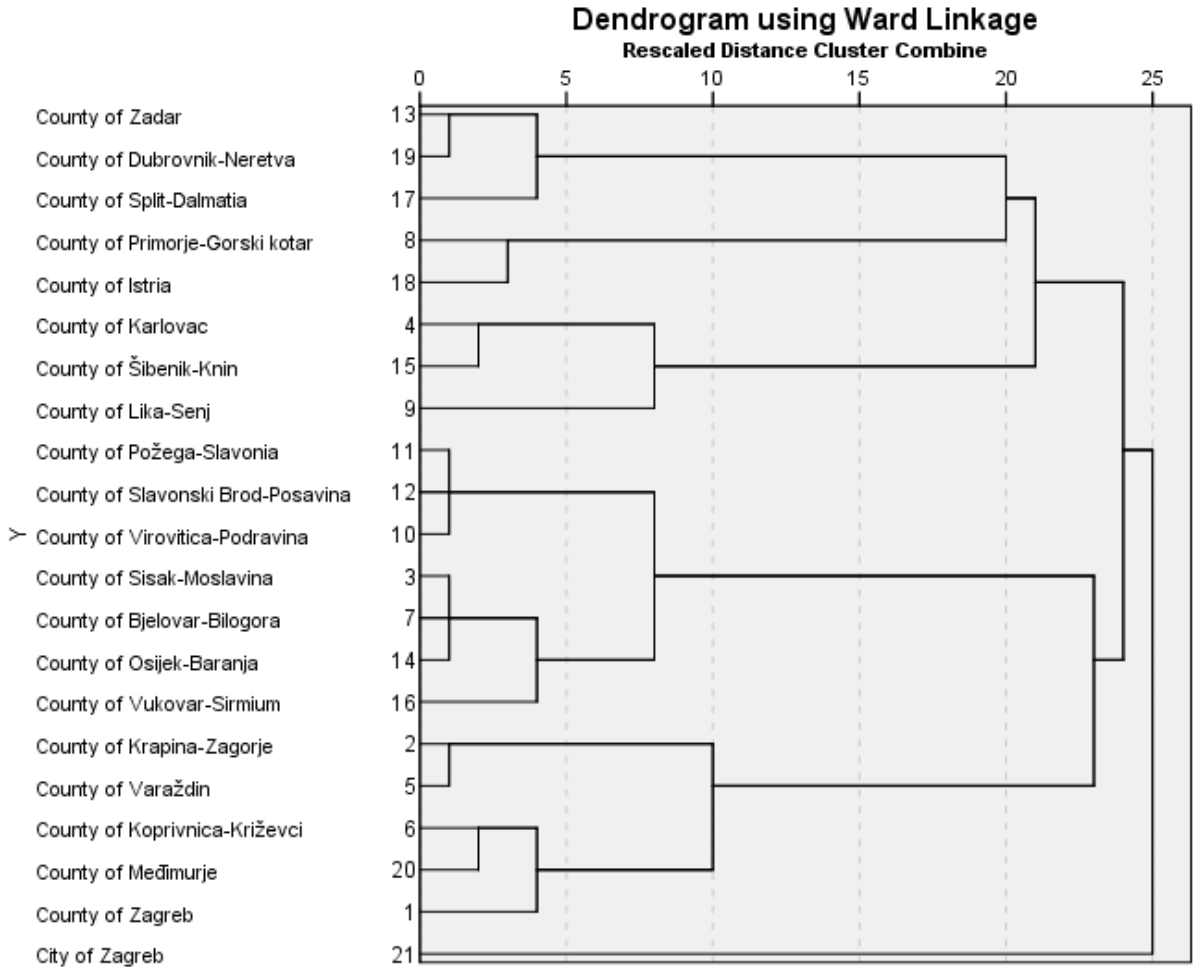
Table 4.3.: The Agglomeration Schedule Process

Stage	Cluster Combined		Coefficients	Stage Cluster First Appears		Next Stage
	Cluster 1	Cluster 2		Cluster 1	Cluster 2	
1	Zadar	Dubrovnik-Neretva	,473	-	-	12
2	Krapina-Zagorje	Varaždin	1,038	-	-	15
3	Sisak-Moslavina	Bjelovar-Bilogora	1,713	-	-	5
4	Požega-Slavonia	SlavonskiBrod-Posavina	2,394	-	-	6
5	Sisak-Moslavina	Osijek-Baranja	3,544	Sisak-Moslavina	-	11
6	Virovitica-Podravina	Požega-Slavonia	4,698	0	Karlovac	14
7	Koprivnica-Križevci	Međimurje	6,084	-	-	10
8	Karlovac	Šibenik-Knin	7,687	-	-	13

9	Primorje-Gorskikotar	Istria	9,772	-	-	16
10	Zagreb	Koprivnica-Križevci	12,767	-	Bjelovar-Bilogora	15
11	Sisak-Moslavina	Vukovar-Sirmium	15,934	Varaždin	-	14
12	Zadar	Split-Dalmatia	19,106	Zagreb	-	16
13	Karlovac	Lika-Senj	24,679	Primorje-Gorskikotar	-	17
14	Sisak-Moslavina	Virovitica-Podravina	30,412	Požega-Slavonia	Koprivnica-Križevci	18
15	Zagreb	Krapina-Zagorje	37,400	Virovitica-Podravina	Krapina-Zagorje	18
16	Primorje-Gorskikotar	Zadar	51,887	Lika-Senj	SlavonskiBrod-Posavina	17
17	Karlovac	Primorje-Gorskikotar	66,940	Zadar	Vukovar-Sirmium	19
18	Zagreb	Sisak-Moslavina	83,796	Šibenik-Knin	Osijek-Baranja	19
19	Zagreb	Karlovac	101,484	Istria	Split-Dalmatia	20
20	Zagreb	CityofZagreb	120,000	Dubrovnik-Neretva	-	0

The results from the cluster analysis can also be observed through the following dendrogram (Figure 4.2). This figure shows clearly the high distance between the City of Zagreb and all the other counties.

Figure 4.2.



Finally we have, taking into account the agglomeration schedule process and the dendrogram, to define the adequate number of clusters. Considering that the number of

spatial units is limited to 21, it is suggested to select a range of solution between 3 to 6 clusters. There is no absolute rule to define the best number of groups that is the solution selected. Generally, we examine the degree of similarity between the spatial units constituting each group and the dissimilarity between the groups. Each alternative solution is examined, by considering firstly the solution corresponding to the smallest number of clusters and then the same analysis is repeated for the other solutions. It is also important to observe the number of spatial units constituting each group, as it appears in the following table.

Table4.4. Cluster memberships

Case	6 Clusters	5 Clusters	4 Clusters	3 Clusters
1	1	1	1	1
2	1	1	1	1
3	2	2	2	1
4	3	3	3	2
5	1	1	1	1
6	1	1	1	1
7	2	2	2	1
8	4	4	3	2
9	3	3	3	2
10	2	2	2	1
11	2	2	2	1
12	2	2	2	1
13	5	4	3	2
14	2	2	2	1
15	3	3	3	2
16	2	2	2	1
17	5	4	3	2
18	4	4	3	2
19	5	4	3	2
20	1	1	1	1
21	6	5	4	3

Following the above mentioned approach and considering the plurality of differences between the 21 districts, we decided to adopt the 6 clusters classification which finally reflects quite well the nature and degree of spatial inequalities in Croatia. Thus, the counties are grouped as follows:

Group1	County of Zagreb, County of Krapina-Zagorje, County of Varazdin, County of Koprivnica-Krizevci, County of Medimurje
Group2	County of Sisak-Moslavina, County of Bjelovar-Bilogora, County of Virovitica-Podravina, County of Pozega-Slavonia, County of SlavonskiBrod-Posavina, County of Osijek-Baranja, County of Vukovar-Sirmium
Group3	County of Karlovac, County of Lika-Senj, County of Sibenik-Knin
Group4	County of Primorje-Gorskikotar, County of Istria
Group5	County of Zadar, County of Split-Dalmatia, County of Dubrovnik-Neretva
Group6	city of Zagreb

4.3 Interpretation of the Results

As we can observe from Table 4.5, cluster 2 and 3 are in the worse position while the first and the fifth are the most developed. Cluster 5 is in a medium situation with both good and bad scores in some indexes and finally the sixth group, the special occasion of city of Zagreb is dominating in all factors except the last one.

More specifically, the first group of counties is favored by very good transportation infrastructure. The railway traffic of passengers as well as the road network density are the best comparing them with the other clusters and in combination with the good proximity with the city of Zagreb, this situation gives many advantages to this area. One of this is the accessibility in good medical care system, which exists in Zagreb, and therefore justifies the not so good performance of this group of counties in variable welf1. Its good quality of life can be also explained by the average of m2 of dwellings which is the highest in the whole country. Therefore, this group is characterized by the best employment level (except from city of Zagreb), a phenomenon which seems reasonable due to the low aging population, the short amount of retired people and the low percentage of population which faces difficulties in performing activities of daily living due to the Homeland war. Succinctly, there is not much inactive population in the labor market. In addition, there are few minorities live in these counties that consist a group which, in the most cases, faces many obstacles in the labour market. On the other hand, the major deprivation of this cluster lies in factor 6. The results show that the population

growth is one of the lowest and it is below the mean of the county, although its total population of 855.837 inhabitants it is not so disappointing. The same or even worse situation we meet in the average annual rate of growth.

Table 4.5. Mean values of the initial variables by group of counties and factors

		Croatia	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
	Number of counties	21	5	7	3	2	3	1
Factor 1	Density	126	115	56	27	78	72	1232
	Weight of each district	4,8	4,0	3,7	2,2	5,9	5,8	18,4
	GDP pc	8476	7850	6489	7856	12620	8904	17814
	Commercial Balance	,19	,26	4,53	3,09	3,43	-,60	-43,33
	Investment FDI	24	20	5	13	44	36	140
	local budget	1515	1098	1177	1189	1517	1101	8168
	% of Higher education	14,6	12,0	11,1	13,2	20,0	19,2	32,4
	% of University study	8,6	6,7	6,4	6,9	12,0	11,3	24,4
	Railway traffic dep of pas/ers	2,5	4,3	1,9	0,7	0,6	0,2	13,1
Factor 2	Pop with difficulties-war	8,9	3,8	11,6	11,8	4,1	11,9	7,1
	Pop with difficulties-war	1,7	0,8	2,3	2,5	0,6	1,9	1,0
	Unemployment rate	21,4	16,8	30,2	21,3	12,1	18,6	9,4
	Employment level	39,6	44,1	35,3	35,1	45,3	39,8	47,8
	% of no schooling	2,0	1,2	2,7	3,0	0,7	2,0	0,7
	% orthodox	5,5	0,8	8,4	11,2	4,4	2,6	2,0
	% Serbs	5,4	0,7	8,1	11,5	4,2	2,5	2,2
	Density of road network	497	717	419	378	528	540	112
Factor 3	Aging ratio	18,2	16,7	17,8	22,5	18,5	17,7	17,3
	% of retired population	29,7	28,6	29,3	34,1	29,6	28,6	28,8
	Dependency ratio	50,6	48,4	51,1	57,0	45,7	51,0	47,1
	% of very small dwellings	22,0	18,5	20,7	30,2	23,0	18,5	32,9
Factor 4	Doctors/1000 inh	3,1	2,4	2,8	3,0	4,1	3,4	6,2
	Average m2 by dwelling	84	92	85	76	78	81	71
	% of large dwellings	7,7	10,3	8,9	5,0	4,3	6,0	6,3
	Average size of agr. farm	1,9	1,7	2,7	1,8	1,4	0,9	0,9
Factor 5	% catholics	87,0	94,2	85,9	83,0	76,6	90,0	83,1
	% Croats	89,7	96,8	87,1	85,9	77,3	94,7	93,1
Factor 6	% Population's growth	5,8	4,3	2,8	5,9	7,7	12,9	8,6
	Average annual rate of growth	7,1	6,6	6,4	7,5	7,1	8,5	8,5

The geographical location of the second group is on the ***east part of Croatia***, where there is large expanse of lowland. This factor characterizes this area as an agricultural one and thus this group of counties holds a great average number of agricultural farms. With a population of 1.098.201 inhabitants, it is obviously the most populated cluster. This group is one of the most problematic ones and that is mostly because of the great damages it suffered from the Homeland war. Hence, we meet people who face difficulties in their daily life due to those damages, we meet great amounts of minorities and aging population and a low rate of population growth. The last observation explains the low attractiveness of this region mostly in economic terms and in labour market. Therefore, it holds the worst position in factors 1, 2 and 6 which interprets the economic urban development, the labour market and the population and economic growth, correspondingly.The unemployment is rampant, the employment level is very low and the GDP pc is the lowest in the country. This whole disappointing economic situation creates

an undesirable ambient for investment as well, and thus the cluster enters into a vicious circle of low development and low prevision of opportunities.

Another group of counties that suffered a lot from the Homeland war and its consequences have not yet been overcome, is the third one which consist the smaller cluster concerning its population (only 289.201 inhabitants). Generally, all the three counties which constitute this group are characterized by a very low population density (including the extreme example of Lika-Senj). This characteristic together with the great percentage of disfavored minorities leads on a problematic labor market and on a disappointing employment level. It is remarkable that this cluster holds the worse scores in all variables of the third factor. Although, its unemployment rate is not the worst and it ranges at the same level with the country's mean. In additional, the population and economic rates of growth are quite similar with those of the country scale, although they are far from the first group

On the other hand, the 4th group of counties, with a population of 504.250 inhabitants,is consisted by the ***two most developed counties of Croatia***. From table 3.5 it is obvious that this cluster dominates on factors 1 and 2 which interprets the economic urban development and the labour market. Thus, on this area we have a very good employment level, a considerably significant local budget and a far greater GDP pc (excluding the one of city of Zagreb) than the one of the rest clusters and the country's mean. Moreover, another advantage that we can observe is the great level of educated population which enhances the prosperity of the region and creates an attractive ambient both for living and investing. In addition to this point, the great number of doctors and the noticeably good density of road network, complete the concept for a better quality of life. On the contrary, the major handicap of this group is the small average of m2 by dwellings which consist a indicator of the level of life. Although, this disadvantage can be equalized by the beautiful and unique touristic destination this area provides in almost all its extent.

The fifth group has a population of 747.383 people, it is located on ***the Adriatic coast*** and had also suffered remarkably from the war, although the main problematic areas of this region are the islands which experience many obstacles and disadvantages on their development, like the inadequate medical and educational system. Despite those difficulties and opposed to the other clusters, cluster 5 presents a significantly great

growth both in population and economic terms. Moreover, its level of people with secondary and tertiary education is very high, a point that mainly refers to the urban areas of the region. Therefore this advantage creates opportunities for further economic activities which could lead on the improvement of the development in economic, social and environmental terms. A reassuring fact is that its unemployment rate range below the mean of the country, while its employment level range at the same level a fact that leaves substantial scope for improving. The handicaps of this region concern mainly the great level of aging population and the inadequate transport infrastructure, both concerning the railway and the maritime transport.

The last group is the capital of Croatia, ***the city of Zagreb*** and it consists a group itself due to specific characteristics. City of Zagreb is both a city and a county, it gathers a great percentage of the population (790.017 inhabitants), most of the investments are yielding there, the social services that provides are more and in better quality than on the rest of Croatia. Unbalanced development throughout the Croatian regions is mostly visible, when comparing the data for Zagreb and the remaining part of the country, this fact has definitely negative impacts on economic development of the whole country (Bacaric, Sumpor, Sisinacki 2005). On this work, we decided to compare this cluster with the country's mean in order to estimate better its impact on the total development.

Therefore, Zagreb is anticipated to cover the best range on the first factor which refers to the urban development. Thus, collecting a great score of population density, the higher GDP pc and the far greater score on local budget and on the amount spent for investments together with the best structure on its educational system raises the total level and creates the prerequisites for further development. The same expected results we meet on the "labour market" factor where the unemployment rate is the minimum and the employment level the best, all the other scores are below the country's mean (except from the road density because we are referring to a city and not to a region) and thus another gap between the capital and the rest of the country arises. Moving on the third factor and the minorities we see that the city of Zagreb again range in a better position than the mean of the country with the only logical exception of the small dwellings which is reasonable to have a tuple into a city. Considering the quality and level of life in a city we can mention that while the agricultural surface and the comfortable and spacious dwellings may lack the good medical care system and the attainable social services succeed to keep a balance.

Finally, it is impressive to note that while city of Zagreb ranges first in almost all factors, in factor 6 loses its domination by cluster 5 which has achieved to reach the economic growth of the capital and appreciably surpassed its population growth.

CHAPTER 5: Conclusions

The Republic of Croatia has undertaken serious preparations for its EU membership, although this effort is still in progress due to the great disparities that faces between its regions. This work as a part of an extensive research about the regional inequalities in both socio-economic and cultural terms has revealed many important features. The first important point concerns the lack of a regional plan which would absorb effectively the funds and the revenues of each region and will allocate them efficiently, targeting on the development of the quality of life and not particularly on growth. Likewise, regional policies have to be an increasingly important part of development and transition policies (Petrakos & Ekonomou, 2002). Although, we observed that Croatian regional policy is still based on old-fashioned instruments such as tax relief's and intergovernmental transfers, while a meaningful approach to supporting regional growth and competitiveness is lacking (Puljiz&Malekovic, 2007). In a period where local leaders have become increasingly responsible for enabling places to thrive, with strong knowledge of their local areas enabling them to tailor services according to local need, to integrate otherwise disparate governmental initiatives, and act as place shapers (Clark, 2009), Croatia still faces great obstacles to deal with the problems and difficulties presented at the local level.

Another interesting observation is obtained by the statistical analysis which confirms the great/extensive demographic problem between the population of some regions with a very high population density and others which face the exactly opposite phenomenon. Then many disparities are noticed in almost all variables. The factor analysis is enriched by a cluster analysis which gave the same results i.e. that there are a lot uncovered imbalances between the counties of the Republic of Croatia. The main gap is observed between the city of Zagreb and the rest country, although significant regional inequalities are noted between some more developed and some unfavored clusters. The major imbalances were referring on the economic urban development, the labour market and the level of education. Certainly, there is a great inequality gap in the demography of the country. The differences on the population density as well as the aging, dependent and the population which suffer from war damages show the great problem Croatia face on that dimension and its influence to the other dimensions demonstrates its great significance.

This unbalanced developmentcan be overcome through a well-examined regional development plan and an improvement on the local government both by improving itsinstruments with elements characterizing modern regional policy and by the better selection, in terms of responsibility, of the candidates. Regional policy measures can lead to desired and equal effects in a specific region only if implemented in territorial entities that are homogenous in regard to dimensions of social and economic development (Bakaric, 2006). Thus, our cluster classification may enhance such a process and gives a proposal to recover the above mentioned imbalances.

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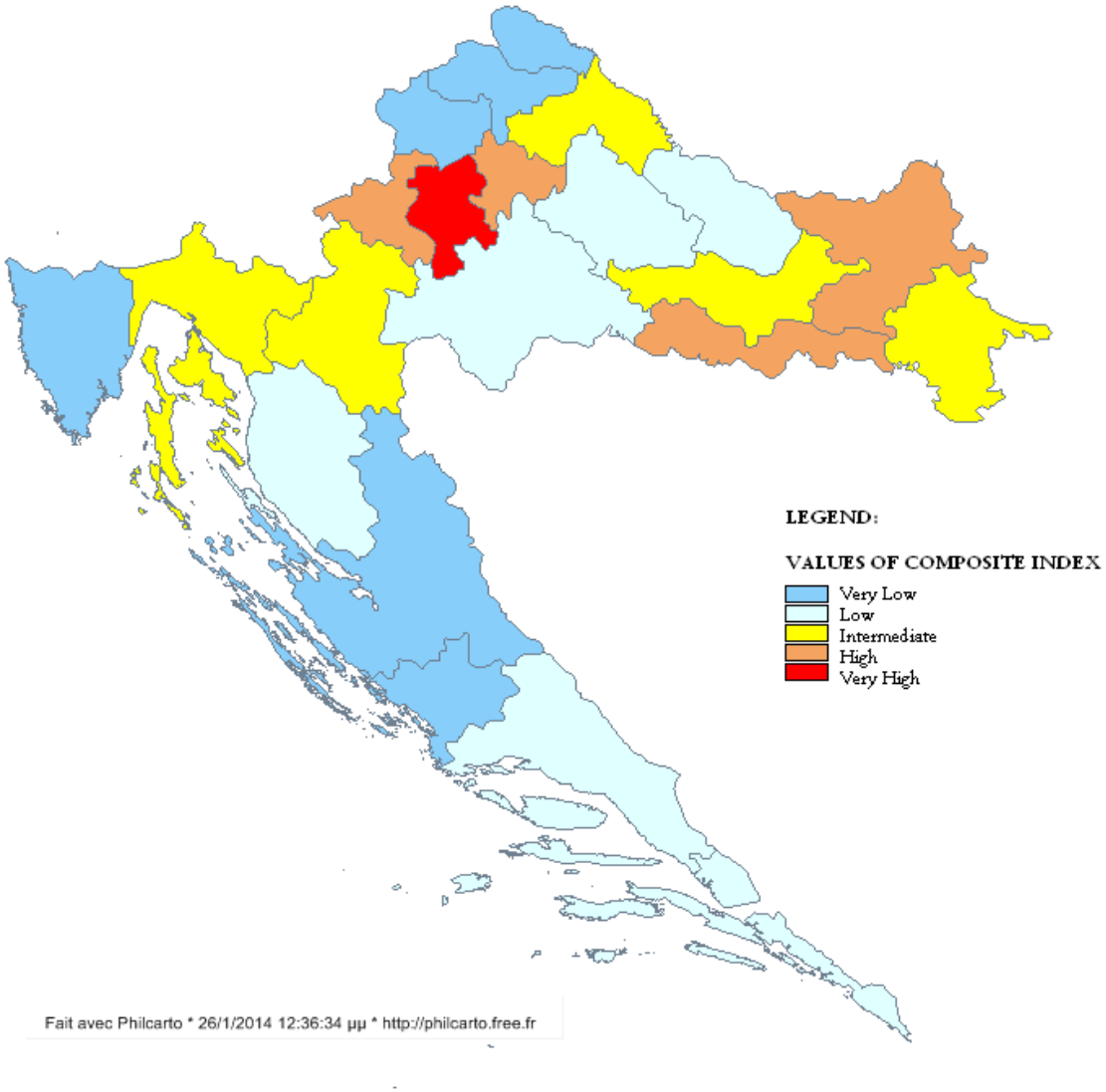
APPENDIX

Table EFA: Scores of the communalities of the variables

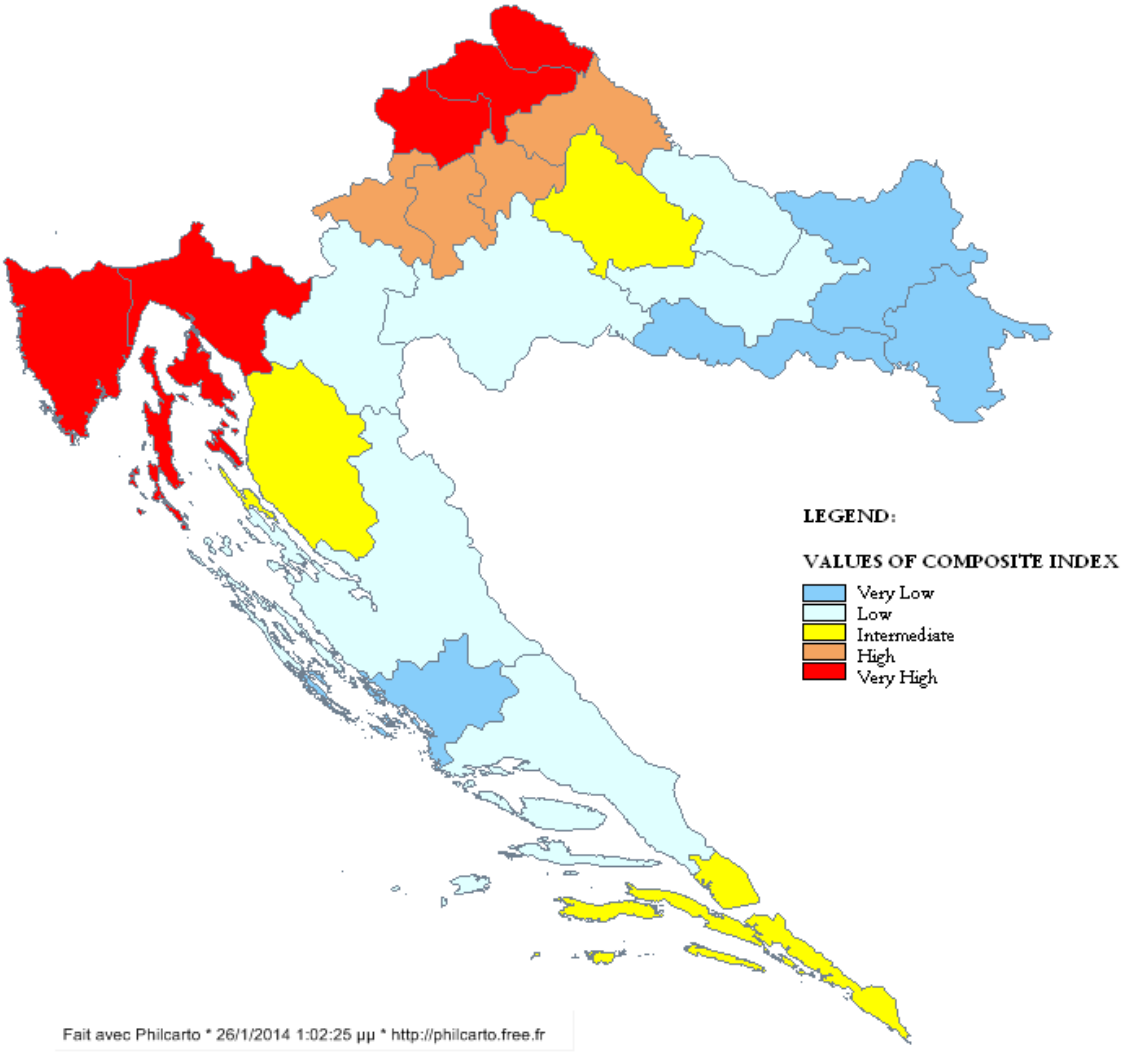
	Initial	Extraction
pop1	1,000	,919
pop2	1,000	,882
pop3	1,000	,882
pop5	1,000	,964
pop6	1,000	,926
pop7	1,000	,960
pop8	1,000	,974
eco1	1,000	,926
eco2	1,000	,813
eco3	1,000	,853
eco4	1,000	,957
eco5	1,000	,936
eco6	1,000	,945
eco7	1,000	,966
eco8	1,000	,892
educ1	1,000	,868
educ2	1,000	,973
educ3	1,000	,983
Welf 1	1,000	,927
life1	1,000	,958
life2	1,000	,888
life3	1,000	,900
env1	1,000	,819
cult1	1,000	,978
cult2	1,000	,951
cult3	1,000	,933
cult4	1,000	,942
Infr 1	1,000	,896
Infr 2	1,000	,883

Extraction Method: Principal Component Analysis.

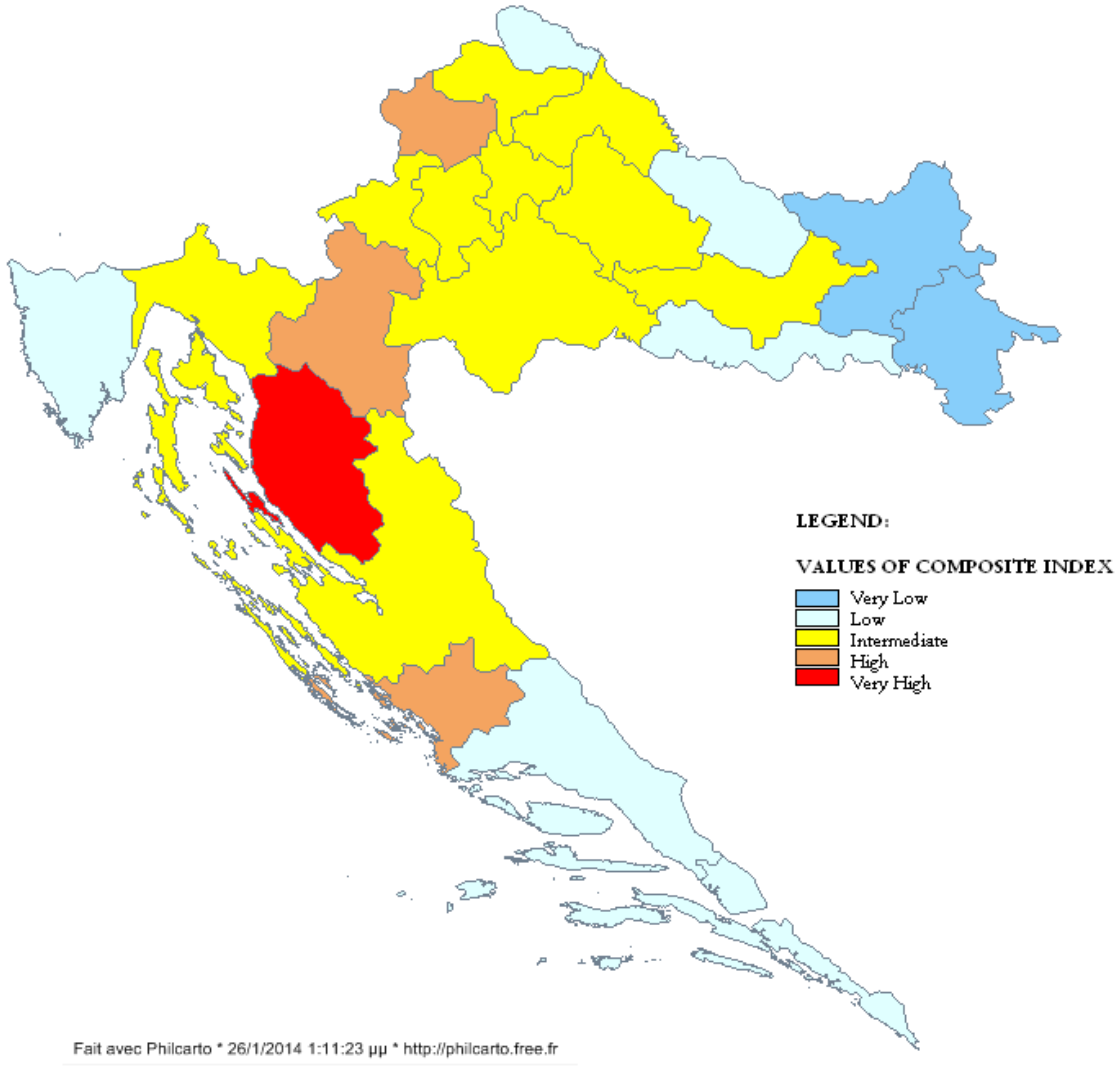
Map 3: Spatial inequalities as regards the degree of economic urban development (index 1)



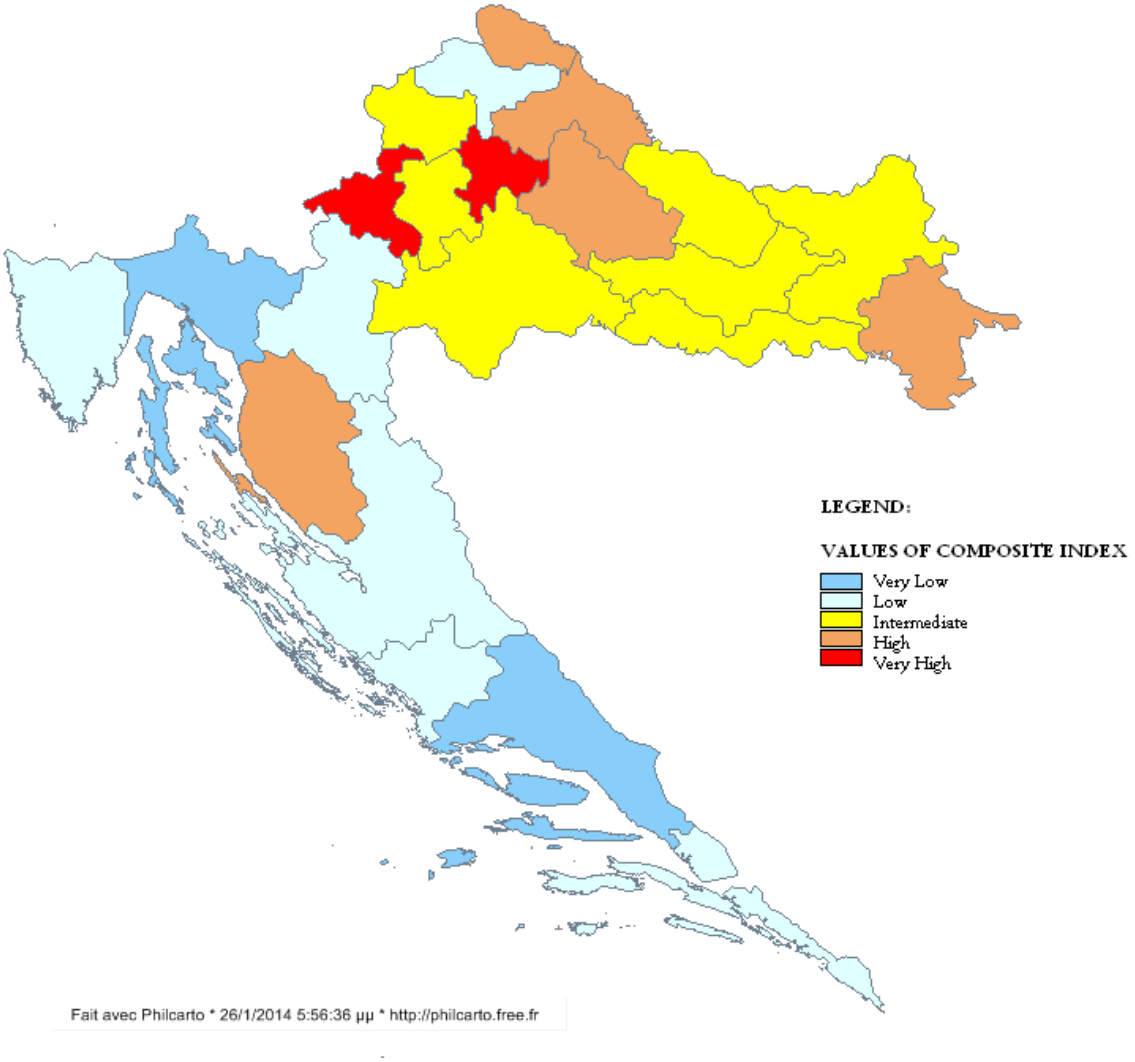
Map 4: Spatial inequalities as regards the dynamic of Labour market (index 2)



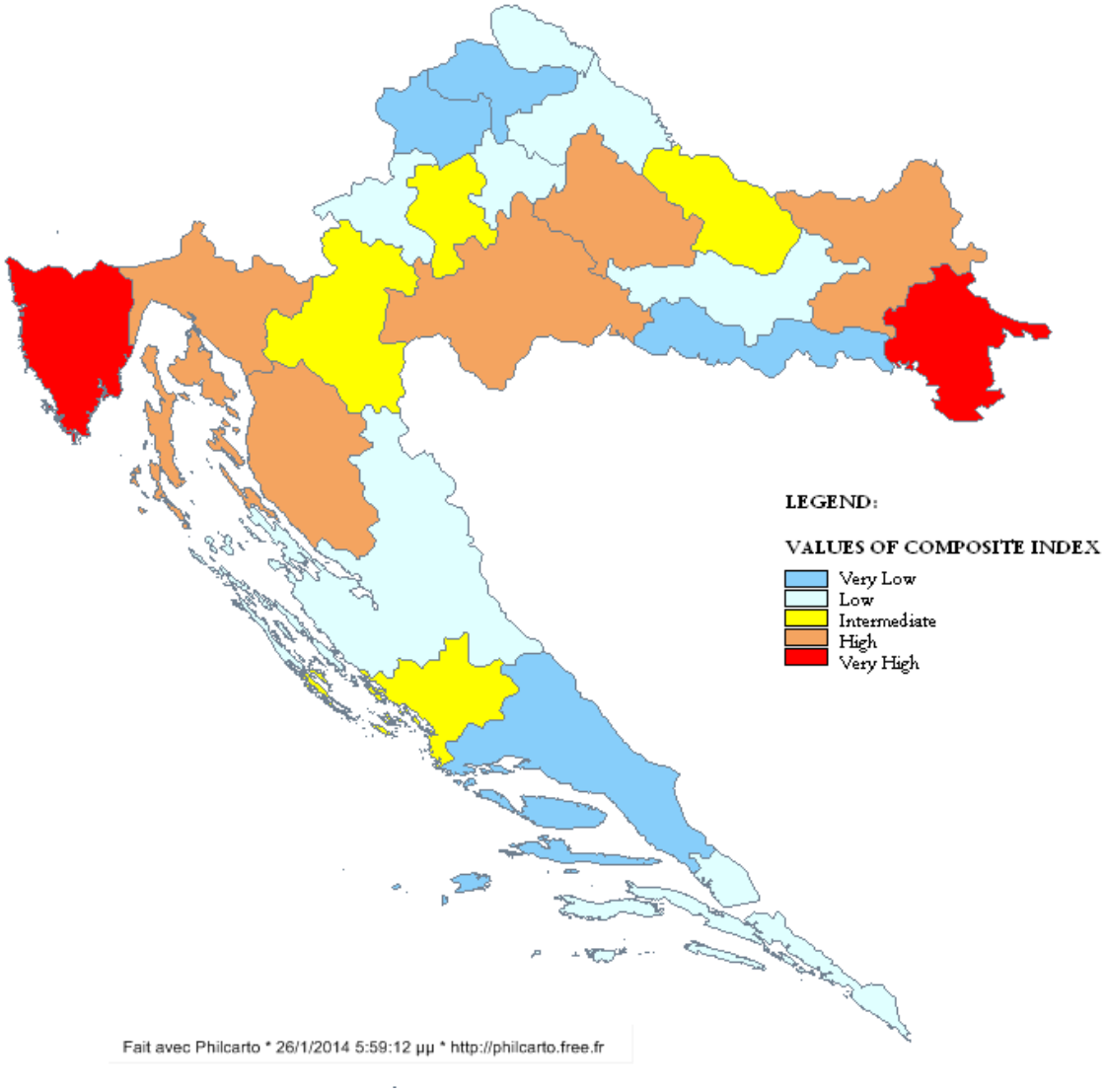
Map 5: Spatial inequalities as regards the demographic dynamism (index 3)



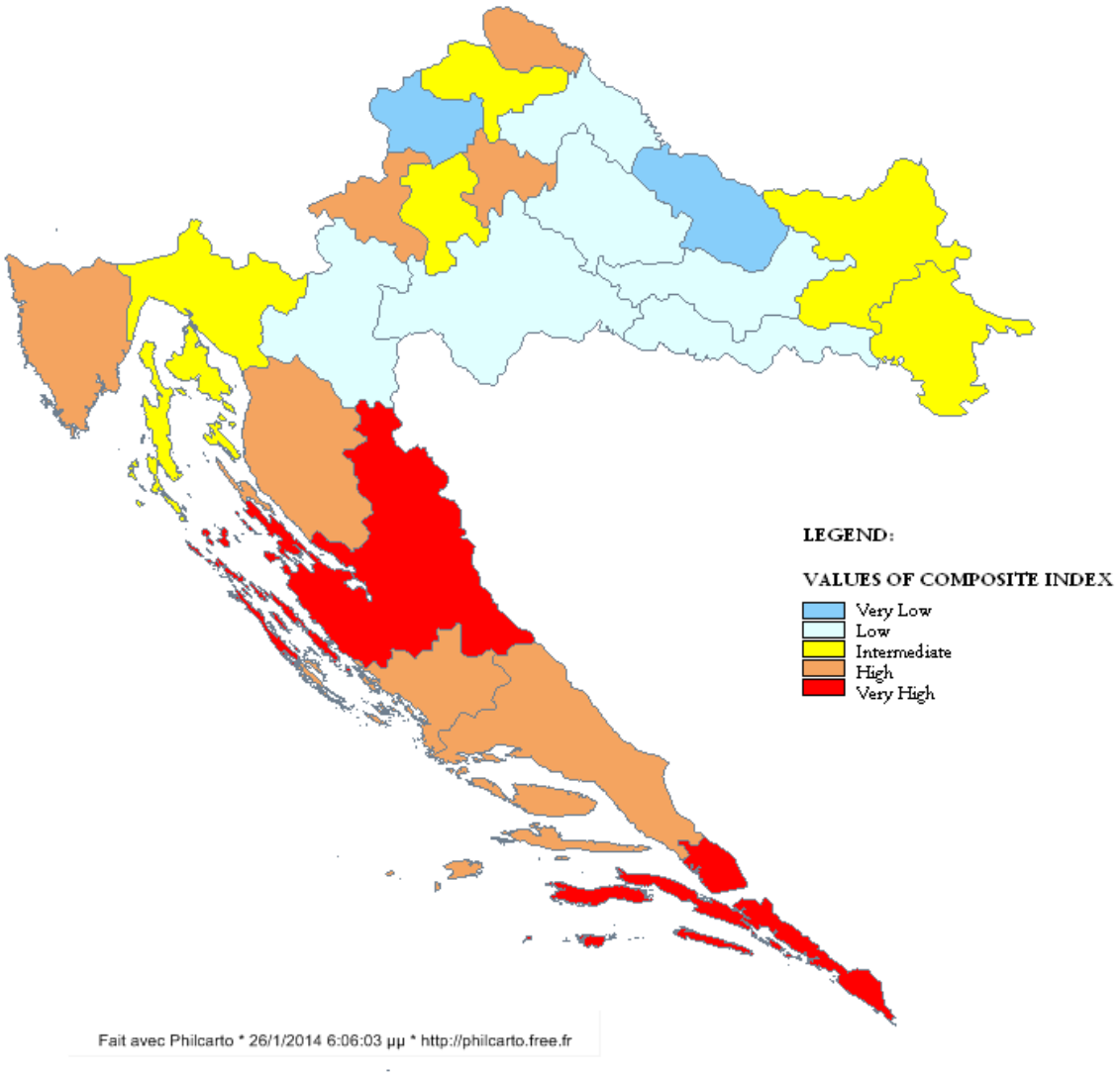
Map 6: Spatial inequalities as regards the level of life (index 4)



Map 7: Spatial inequalities as regards the degree of cultural hybridity (index 5)



Map 8: Spatial inequalities as regards the growth's intensity (index 6)



Map 9: Classification of Counties in terms of multidimensional inequalities